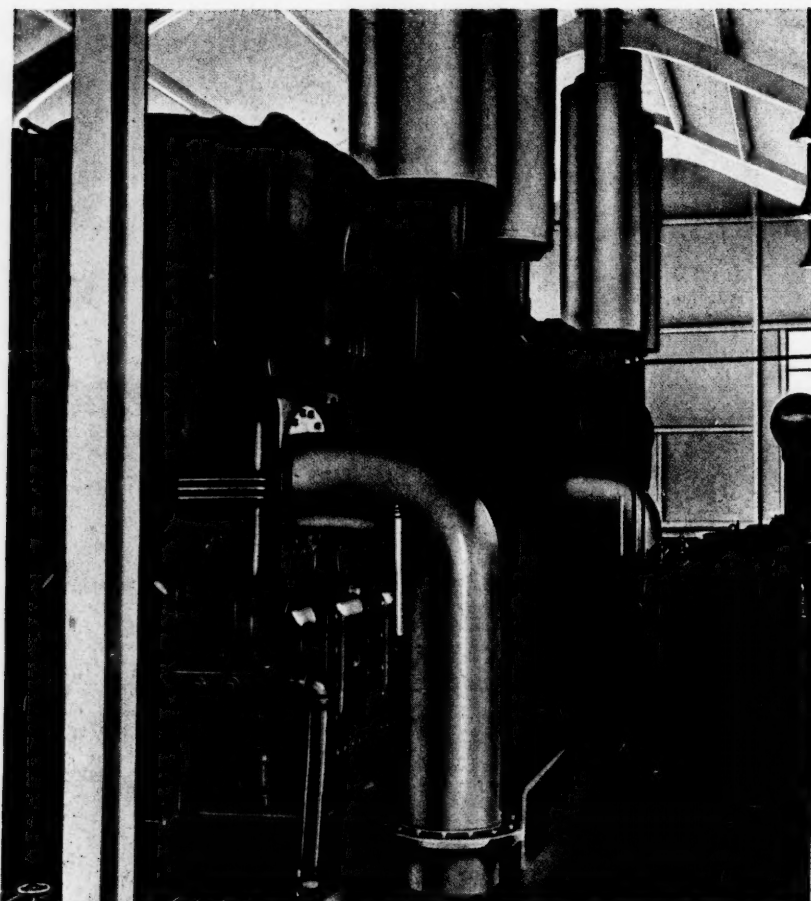


MANUFACTURERS Record

featuring
TEXAS

JULY ★ 1946



Color Dynamics

Pittsburgh's scientific use of the energy in color once more demonstrates its ability to improve working conditions, reduce accidents . . . and increase quality and quantity of production!

COLOR DYNAMICS At Work In Colorado Gas Plant

PRODUCTION EXECUTIVES in many industries are learning by actual experience how great an influence Pittsburgh's new painting method—COLOR DYNAMICS—exerts upon employees and their work.

Among hundreds of such instances is that of the Colorado Interstate Gas Company, of Denver which carries natural gas from the Texas fields to the Rocky Mountain region. Here application of the principles of COLOR DYNAMICS helps to maintain higher employee morale, a better safety record and more efficient production.

Such improvements are the usual result everywhere that COLOR DYNAMICS is applied. For its principles are based upon the reactions of human beings to the energy which science has proved that colors possess.

Where COLOR DYNAMICS is used, every color on walls, floors, ceilings, machines and mobile equipment performs definite duties. Focal and eye-rest colors lessen eye fatigue. Morale-building colors restrain mental depression. Safety colors warn of impending danger.

You can readily test the value of Pittsburgh's COLOR DYNAMICS on a machine or two in your plant. Note the difference it makes—in efficiency, morale and output.

For a complete analysis of the services color can perform, write for a free copy of our booklet, "Color Dynamics," Pittsburgh Plate Glass Co., Paint Division, Dept. MR-5, Pittsburgh 22, Pa.

Paint RIGHT with Color Dynamics
Paint BEST with Pittsburgh Paints!

● Make the benefits of COLOR DYNAMICS last longer by using Pittsburgh Paints. You'll find a high-quality product for every need!

WALLHIDE—in three types: PBX—extra durable finish which can be washed without streaking or spotting. SEMI-GLOSS—for higher sheen. FLAT—velvet-like finish for offices, suites and dining rooms. These paints are enriched with "Vitolized Oils" for live-paint protection!

FLOORHIDE—for floor surfaces. Quick drying, tough, can be scrubbed frequently with soap solutions.

LAVAX PBX ENAMEL—for woodwork, furniture, metal trim—its china-like gloss resists marring and abrasion.

LAVAX MACHINERY ENAMEL—tough, durable, impervious to oil, grease, grime or dirt.



PITTSBURGH PAINTS

PITTSBURGH PLATE GLASS COMPANY, PITTSBURGH, PA.
PITTSBURGH STANDS FOR QUALITY PAINT AND GLASS

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MANUFACTURERS RECORD

ESTABLISHED 1882

A Publication for Executives

Volume 115

JULY, 1946

Number 7

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Working plant

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—machining,

—heat treating of
alloy steels,

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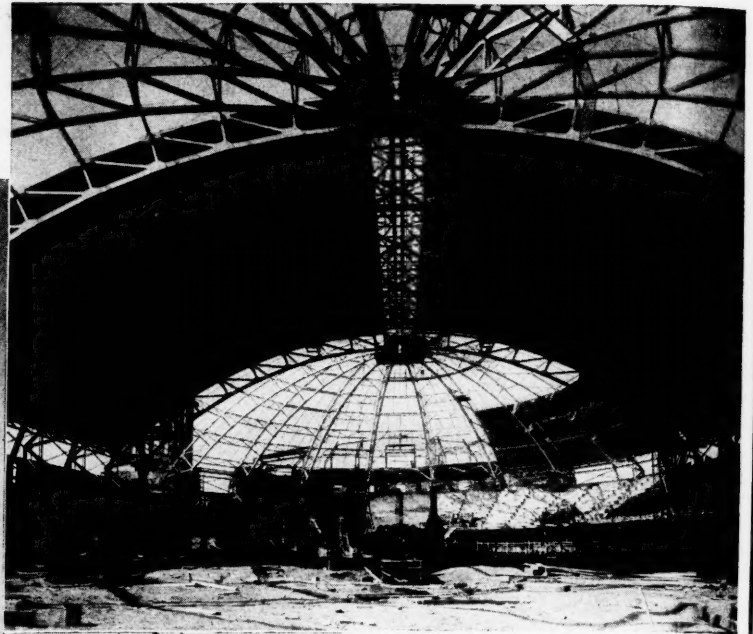
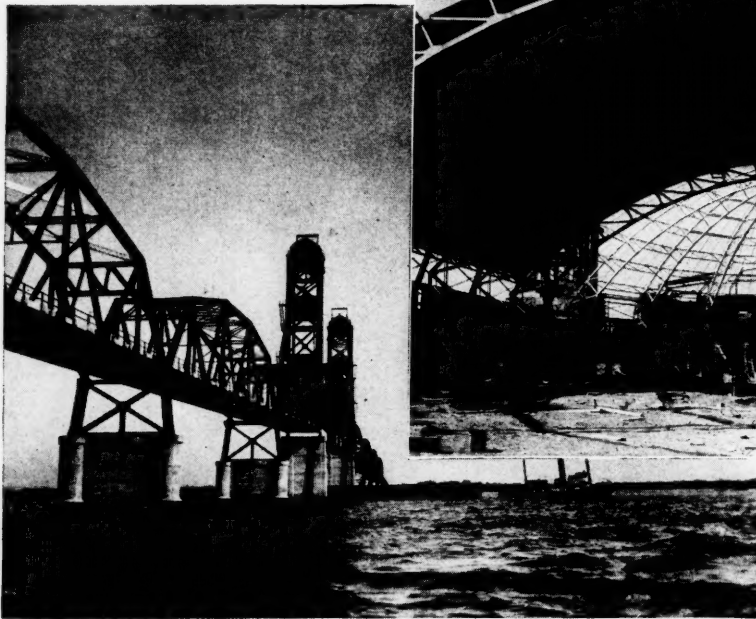
R. H.

BOULIGNY
INC.

CHARLOTTE, N. C.

STEEL IS AT HOME ANYWHERE

Newport News—James River Bridge
Length—5½ miles



Coliseum—Fort Worth, Texas
232' x 405' with 217'
clear unobstructed width

Whether it be in a great bridge carrying heavy traffic or in the spiderwork framing of a beautiful coliseum steel is equally at home, because it is easily the most versatile and adaptable of all building materials. For maximum strength, durability and ultimate economy in the construction of bridges and buildings steel is the answer. Because there is no limit to the forms it can take to accommodate structural designs for beauty, safety or utility steel again is the

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And as wide as the use of structural steel for construction purposes is the engineering, fabricating and erecting experience of VIRGINIA BRIDGE. We have the "How-to" for every type of steel structure, and we KNOW what the contractor, the engineer and the owner expects of his steel fabricator. For fifty years Virginia Bridge has been measuring up to those expectations with remarkable success.

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if it's structural steel we welcome
your inquiries



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UNITED STATES STEEL

Plugin



plugin

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All **FA** Plugin Units, attractively finished in pearl grey enamel, are ready to plug into any one of the standard outlets of **FA** Busduct... and can be mounted on either or both sides of the Busduct section. Their sturdy galvanized sheet steel enclosures and their rugged compression-type bus bar connectors add to the life and service of your **FA** Busduct electrical system.



CIRCUIT BREAKER

This Plugin Unit provides automatic thermal protection for circuits and equipment. Capacities: 15-225 amps., 250 and 575 volts.

SHUTLBRK

A quick make-and-break, heavy-duty operating switch... excellent for frequent operation. Capacities: 30-200 amps., 250 and 575 volts.



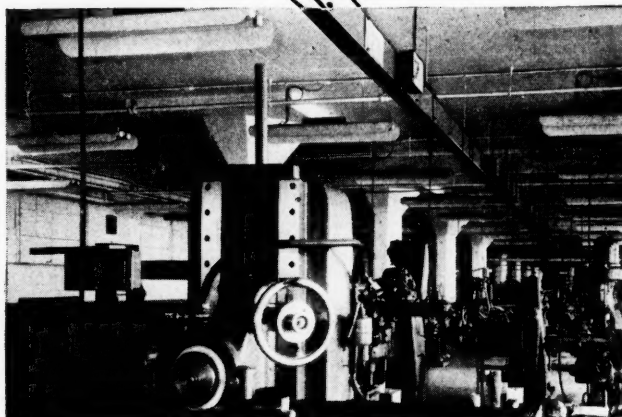
KLAMPSWITCHFUZ

Excellent for disconnect service... the hinged-type pull out door contains *both* switch and fuse in one unit. Capacities: 30-200 amps., 250 and 575 volts.

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for POWER DISTRIBUTION

"All Along the Line"



If you are looking for an efficient yet economical way to increase the productive capacity of your plant, then consider **FA** BUSDUCT—the modern method of power and light distribution.

Combining high efficiency with greatly increased flexibility and economy, **FA** PLUGIN BUSDUCT makes power available *where* and *when* you need it. It reduces to a minimum the costly delays of moving and relocating machinery, and eliminates long expensive lead-ins with a consequent fluctuation in voltage.

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For full details consult your nearest **FA** representative.

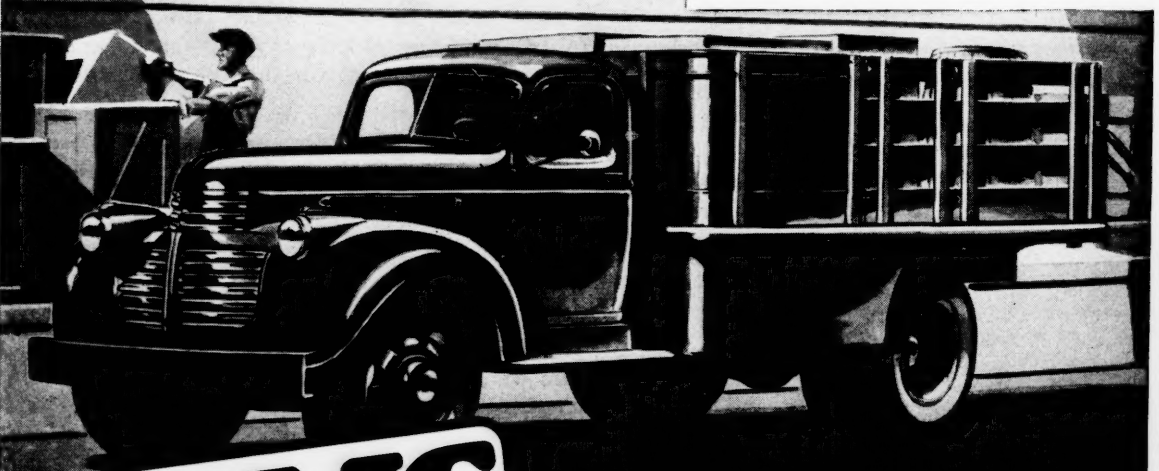
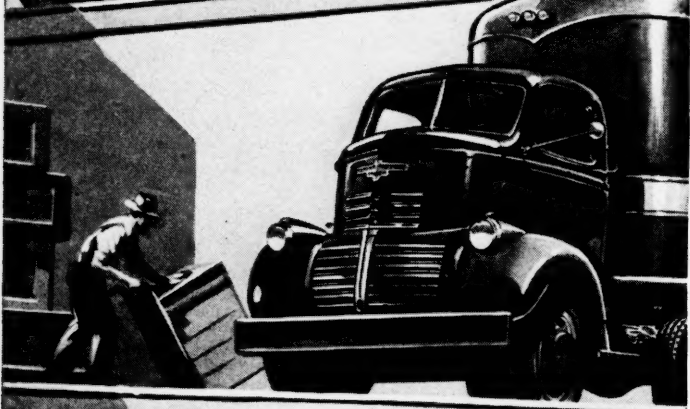
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Whatever your hauling requirements . . . large or small, heavy or light . . . GMC's wide range of models from ½ to 20 tons offers you the exact kind of trucks you need to do your job. Postwar GMC pickups, panels, stakes, platforms, tractors and chassis units are the best GMCs ever built. They have engines of the same basic design as the famous "270" which powered nearly 600,000 GMC-built Army trucks. They boast heavier frames and axles, sturdier clutches and transmissions and bigger brakes, in addition to such prewar GMC advantages as Turbo-Top Pistons and Recirculating Ball-Bearing Steering. GMCs are all-truck built. They're built for your business.



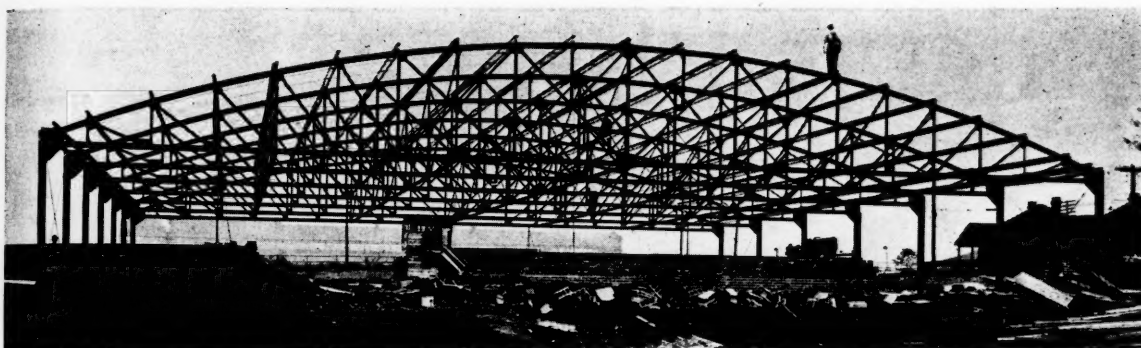
GMC
TRUCKS

The Truck of Value

GASOLINE • DIESEL

GMC TRUCK & COACH DIVISION • GENERAL MOTORS

The Great Open Spaces



*Building for Southern Bell
Tel. & Tel. Co., Birmingham*

Call for STEEL



*The Army-Navy "E"
with two stars was
awarded for quality and
speed of production.*

Many buildings require uninterrupted floor areas, as the one shown above. In this case the problem was met by using Bow-string Truss Construction.

Of course, such construction is possible only with steel. Further, it requires accurate fabrication to meet the exacting specifications. Jobs of this kind are handled by us with ease, due to our competent engineering staff and our plant facilities for exact fabrication.



The most modern steel fabricating plant in the South—built 1942

SOUTHERN STEEL WORKS

KIRKMAN O'NEAL, *President*

Offices: 745 NORTH 41st STREET, BIRMINGHAM, ALABAMA



★ ★ ★ ★ ★ LITTLE GRAINS OF SAND ★ ★ ★ ★ ★

*"Little drops of water, little grains of sand,
Make the mighty ocean, and the pleasant land."*

The President has shown a commendable concern for the welfare of the people with his recent expression of alarm over the deplorable increase in automobile accidents. It must be comforting for him to find an issue on which he can't go wrong. Coming out in favor of automobile safety is on a par with going on record against sin. Wonder when he'll do that?

The Huntington (W. Va.) *Advertiser* has come up with a splendid idea for preventing labor strife. It has long been axiomatic that when dealing with such avaricious men as loan sharks, prize-fight managers and out and out racketeers, the most effective way to hurt them is through the pocketbook. The *Advertiser* suggests that we do just that with labor leaders. When there is a strike, during which management cannot produce and labor cannot earn money, why not stop the salaries of all labor officials involved? An alternative is to divert the money into a welfare fund controlled by management and labor alike.

The government continually urges us to buy United States Savings Bonds and to hold on to the ones we already have. It must realize that if it is the custodian of our savings, it must carry certain responsibilities. Of course, it cannot guarantee the value of a dollar ten years from now, but it should take all possible steps to see that the dollar remains stable. An end to deficit financing in peacetime is the first and foremost of these steps.

We all know that the average worker wants, above everything else, a steady job at good wages. This is the kind of security that he dreams about. He wants it more than any synthetic security the government can offer him.

There's a job wide open now for an enterprising, honest far-sighted man. The field is crying for an honest labor leader—a man who sees in his position opportunity to benefit the nation as a whole, and thereby really improve labor's lot. The rank and file of organized labor, just as the rest of the country, is sick ad nauseam of grasping charlatans beholden only to themselves or to Russia. The first man who realizes this will find he has the support of the working man, management, official Washington—in short,

everyone except the parasites presently engaged in sucking blood from the veins of our national economy.

Anyone who thinks that the South's boosters all come from within might well be interested in the following remarks of William L. Batt, one of the nation's leading industrialists and president of SKF Industries, Inc.

Said Mr. Batt: "The South is now proclaiming her natural advantages of climate and materials, the inherent intelligence of her population and her vast untapped resources." He went on to state that, by her aggressive new approach to industrialization, the South was rapidly becoming "the nation's number one economic opportunity." Where have we heard that before?

The leftist propaganda from the OPA and its fellow travelers has had one dominant theme. It tried to scare the pants off us. Reason and logic were abandoned, and the radical elements tried to sell us OPA the same way some manufacturers try to sell soap—we must have it for fear of what will happen if we don't. We are pleased to see that, while the bureau vermin executives may be afraid, our people are not.

America preaches the virtues
of democracy abroad while it
practices the vices of au-
tocracy at home.

Economic stability cannot be legislated; it must be earned in a free economy. No better proof of this statement exists than the economic condition of the South today. In 1860, the South owned 39 per cent of the nation's wealth. Ten years later, after the Civil War, this amount was down to 14 per cent. Despite the fact that today the states of the South comprise a far smaller proportion of the states of the country than they did in 1860, today the South has accomplished the seemingly impossible feat of pulling itself up by its own bootstraps. The latest figures show that the South now has more than 22 per cent of the nation's wealth. And it didn't get it by lend-lease.

Every so often we are delighted to see that there are responsible, right-thinking men in the ranks of organized labor. When such indications occur, we like to pass news of them on.

For example, the rank and file of the UAW-CIO workers at Ford plants have voted to ratify a contract
(Continued on page 16)

For Heavy Duty Forged Shafting
USE **JALLOY** FOR LONG SERVICE



Jalloy is a special alloy steel, made by Jones & Laughlin for machine and equipment parts that must stand up under the most severe operating conditions. It is ideal for shafting that is subjected to repeated shocks, torsion and dynamic stress. Jalloy is readily forged and heat treated. Write today for information.

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PITTSBURGH 30, PENNSYLVANIA

JULY NINETEEN FORTY-SIX

11



HOW ANOTHER SMALL BUSINESS TOOK ROOT IN ALUMINUM



Sitting pretty

in SMYRNA, GA.

There's a healthy young industry "blooming" down on a farm near Marietta, Georgia—Smyrna Industries, Inc. They make aluminum furniture.

How did this get started?

In the Marietta bomber plant, Mr. C. J. Huggins had learned a new trade—the "aluminum trade". Got acquainted with aluminum, liked to work with it, dreamed of things that could be made with it easily, quickly—things like aluminum stools and tables for kitchens; bar and soda fount stools, occasional tables and dinette suites.

Shortly before V-J Day, he launched the project—ten employees, in a barn building. But, there were problems even for experienced aluminum workers. What aluminum alloy would be best to use? What temper? What finish?

"The Aluminum Company of America engineers and technicians answered my call," says Mr. Huggins, "and were mighty helpful. They recommended changes in alloys that resulted in greater ease of manufacture, more beauty and economy."

Today, with 100 workers, in five farm buildings, Smyrna Industries is proudly turning out thousands of stools a week. The business is indeed "sitting pretty".

This is another example of how hundreds of businesses have been helped by Alcoa's 58 years of experience with the makers of all kinds of aluminum products.

Maybe Alcoa experience can be helpful to you. Sales offices in 53 leading cities. ALUMINUM COMPANY OF AMERICA, 2109 Gulf Building, Pittsburgh 19, Penna.



This group of farm buildings houses Smyrna Industries, Inc.

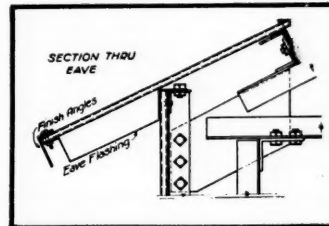
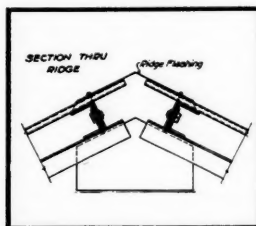
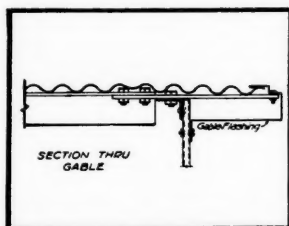
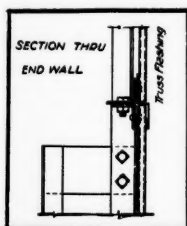
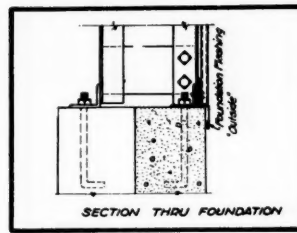
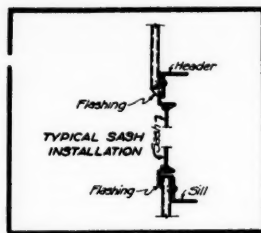
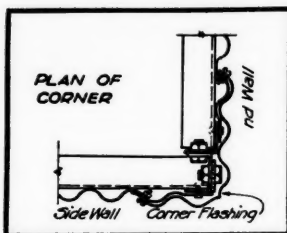
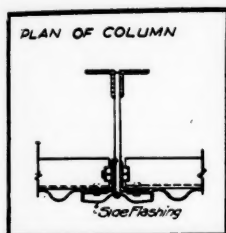
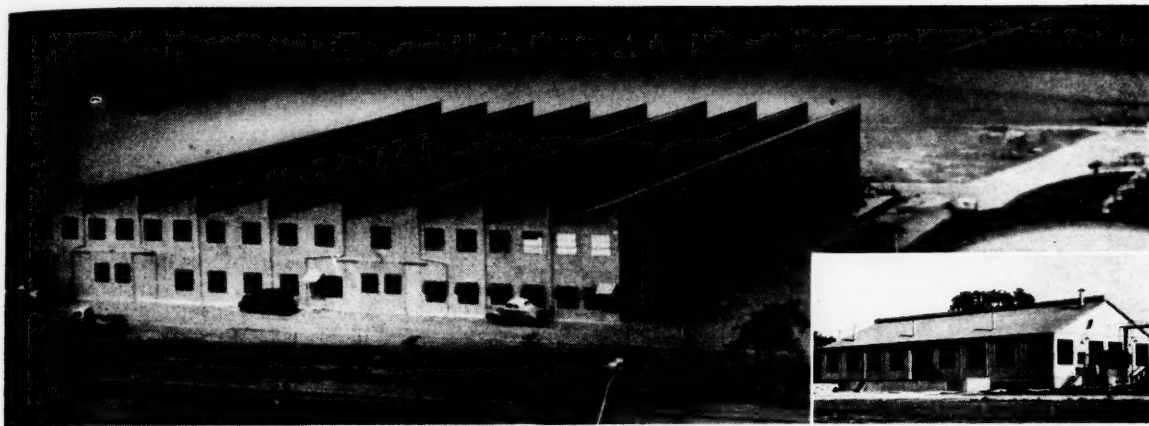
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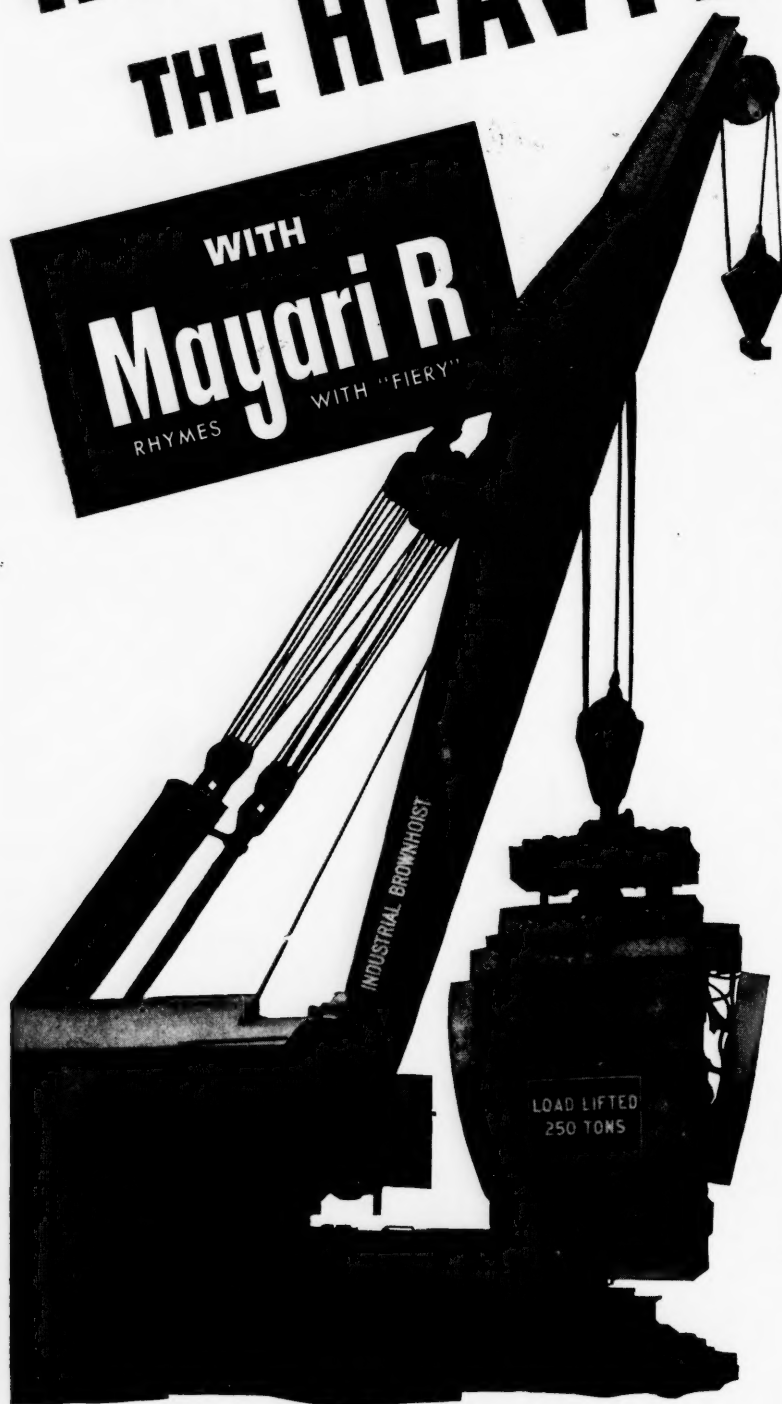
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ALLIED STEEL PRODUCTS CORP.

2100 NO. LEWIS

TULSA, OKLAHOMA

HOISTING THE HEAVYWEIGHTS



At a 17-ft. 6-in. radius from the center of revolution, this newly designed wrecking crane lifts 250 tons . . . at a distance of 6-ft. 6-in. directly in front of the coupler it can lift 150 tons.

The 46-ft. boom embodies a new design which permits maximum reach with both main and auxiliary blocks. The side girders of this boom and the tension links which lift it are made of Bethlehem's Mayari R, high-strength, low-alloy steel.

In all such equipment, economical design calls for steel with a high strength-weight ratio. Mayari R has this strength—its yield point is 50,000 p.s.i. minimum as compared to 25 to 30,000 p.s.i. for mild-carbon steel. It has an ultimate tensile strength of 70,000 p.s.i. minimum. As a result, deadweight reductions of as much as 40 per cent are often possible.

Mayari R presents no difficulties in forming, fabricating and welding—the usual shop methods are recommended. It is usable in the "as-rolled" condition—heat-treatment is not necessary.

Look into the possibilities of using strong, weight-saving Mayari R for all jobs where lower deadweight, higher strength and reduced operating costs are important considerations.

Industrial Brownhoist Corporation, Bay City, Mich., built four of these 250-ton-capacity wrecking cranes for an Eastern railroad. Mayari R high-strength steel was used in the booms and tension links.



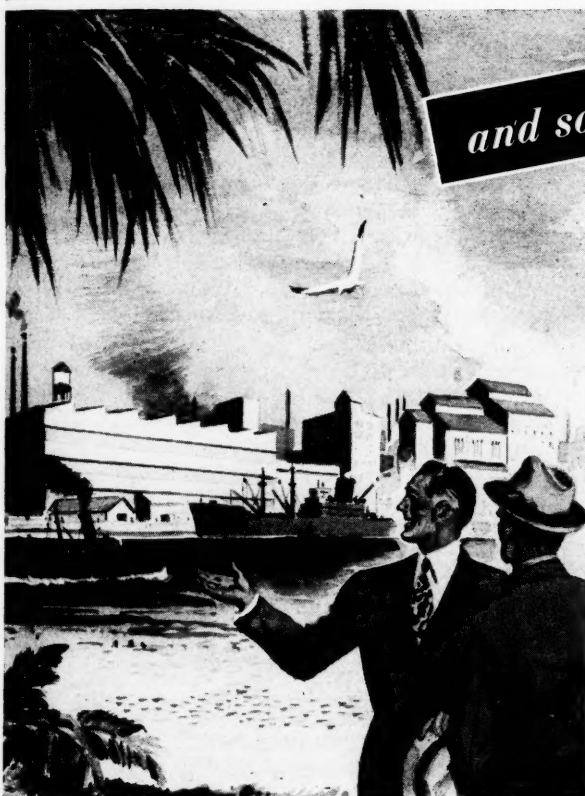
Mayari R *makes it lighter...stronger...longer lasting*



this is **FLORIDA**

"Many Happy Returns"

For many happy returns—in pleasure, in recreation and in health—plan a Florida vacation this fall. You will find autumn in Florida delightful—bright sunshiny days, star-studded nights, with the palms and pines still wearing their springtime green. Here's the perfect setting for the enjoyment of Florida's endless variety of exciting sports and attractions, or for complete rest and relaxation. Accommodations are more plentiful, transportation easier to arrange. Have fun this fall in Florida.



and so is **THIS**

Your trip to Florida can be far more than a grand vacation. There may be "many happy returns" for you in the opportunities Florida has for industry—large and small. Industry is rapidly discovering important advantages in a Florida location.

Consider these plus factors in respect to your own business: ideal working weather right through the year . . . strategic relationship to new, growing markets . . . tax laws friendly to private enterprise . . . good labor conditions . . . less costly plant construction and maintenance . . . and healthier, happier living for you and your employees.

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Please send me free illustrated booklet, "THIS IS FLORIDA."

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City _____ State _____



FLORIDA

THE SUNSHINE STATE

THIS COTTON BOLL IS FOOD, FEED and FIBER ALL AMERICANS NEED /

COTTONSEED OIL, for Shortening, Margarine, Salad Dressing and other food products, makes Cotton one of America's leading FOOD CROPS.

COTTONSEED MEAL, CAKE and HULLS, for balanced, efficient rations to produce Meat, Milk and other livestock products, make Cotton a leading FEED CROP.

COTTON LINT and COTTON LINTERS, fibers that all the world needs, make Cotton America's leading FIBER CROP.

Together, these versatile products, make Cotton American farmers' leading CASH CROP, the greatest source of INDUSTRIAL EMPLOYMENT of any American crop, and an economic asset to every American.

Educational Service
**NATIONAL COTTONSEED
PRODUCTS ASSOCIATION**

INCORPORATED
618 WILSON BUILDING DALLAS 1, TEXAS



(Continued from page 10)

cracking down on wildcat strikes, despite the opposition of union leaders. And the AF of L Electrical Workers are offering \$6,000 in prizes for the best ideas for speeding construction and lowering the building costs of homes. And labor's *Monthly Survey*, an AF of L publication, states that industry's profits should bring, along with increased wages and price reductions, a reward for management as an incentive to improve production. Maybe the Communists are losing their grip.

We note that the National Industrial Conference Board reports that profit-sharing plans for employees are disappearing right and left. Out of 161 plans surveyed by the Board, 60 per cent have been abandoned.

Employee dissatisfaction was given as the number one reason for dropping the plans. The employees seemed unable to grasp the relationship between profits and the business cycle. All was rosy as long as the money rolled in, but as soon as profits took a drop, the workers wanted to drop the plan. And the big corporations are popularly supposed to have a monopoly on greed!

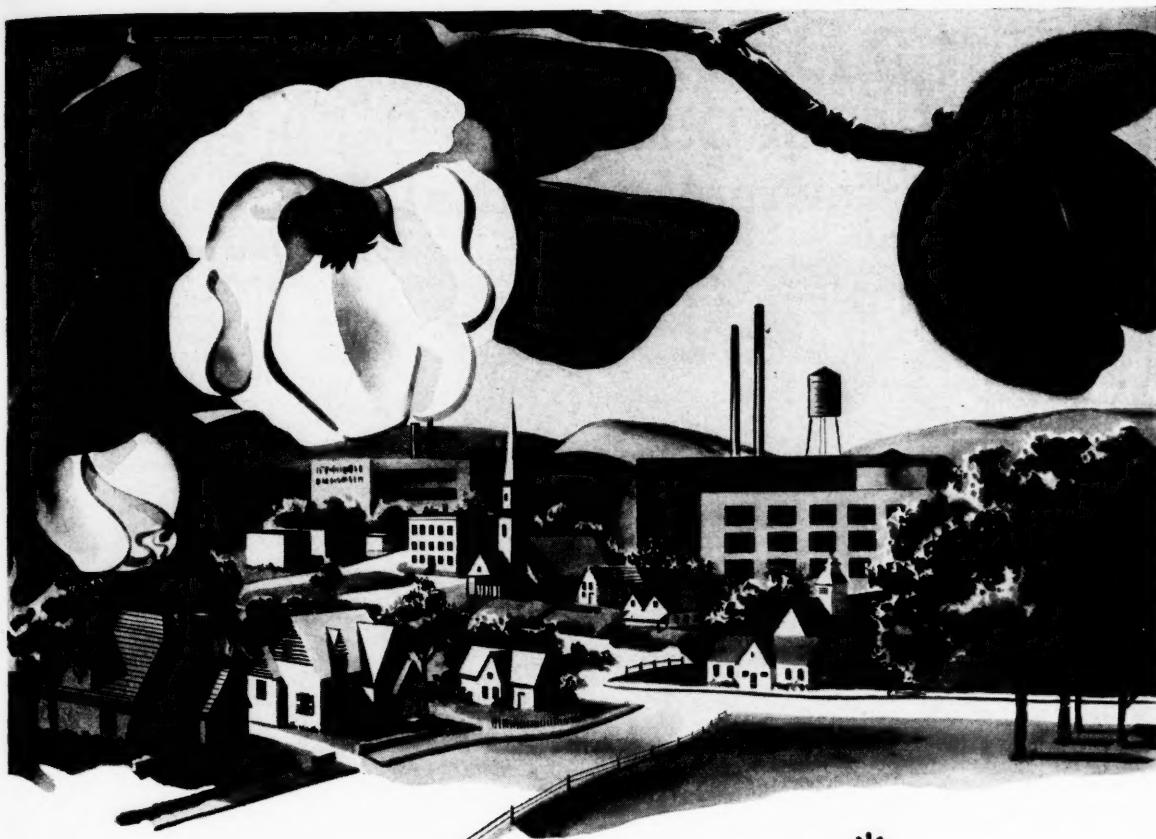
"What exists in this country today is a monopoly of labor, just as firmly entrenched as any industrial monopoly that has existed in our history controlling a basic commodity. This monopoly is established by the system of the closed shop, whereby no man or woman can obtain work in a closed industry unless he or she is permitted to join the union. . . . I think a closed shop is undemocratic in a democratic country. I think the right to work is an inherent right in our democracy. This right to work should not be denied to any citizen, as can be done now by these great labor leaders who are determined to preserve the monopoly given them by the system of the closed shop. I believe that many laboring men are opposed to the system of the closed shop.

" . . . I believe in unions, if properly operated, just as I believe in the corporate method of business operation, if properly conducted, but special privileges under the law must not be given to either. Hillman, Lewis and Petrillo have done and are doing infinitely more harm to the millions of patriotic laboring men than the most violent opponent of labor unions could possibly accomplish."

Senator Harry F. Byrd.

Important strikes are no longer settled by the disputants. They are settled by the Federal Government, with the people paying the bill. The recent coal strike is a case in point. Most of John L. Lewis's demands were met. As a consequence, the OPA has announced a rise in coal prices of forty and a half cents a ton. Conservative estimates say that this government maneuver will cost the public \$240,000,000 in the next year.

(Continued on page 34)



Pleasantville G. S.*

... a better place to Live and Work

Your people... your managers, superintendents and workmen... will like living in the Gulf South. There's year-round "outdoor" weather for recreation, gardening, sightseeing. Living costs are lower, with only low-cost Natural Gas required for heating. Good schools and colleges on every hand provide for not only sound academic education, but also adequate technological training.

There's many a "Pleasantville" in the Gulf South awaiting your selection of a new plant site....

Scores of manufacturers and distributors have already asked us for assistance in solving their expansion and location problems. We can help you as well!

Your inquiry will be held confidential, of course.

UNITED GAS... serving the



*Gulf South**

For specific information on the Gulf South, write to Manager of Industrial Development.

For inquiries to the following cities, address **UNITED GAS PIPE LINE COMPANY**: IN TEXAS—Beaumont, Dallas, Fort Worth, Houston, Longview, San Antonio and Wichita Falls; IN LOUISIANA—Baton Rouge, Lake Charles, Monroe, New Orleans and Shreveport; FOR MISSISSIPPI, ALABAMA and FLORIDA—Jackson, Mississippi. For inquiries to the following cities, address **UNITED GAS CORPORATION**: IN TEXAS—Huntsville, Jacksonville, Laredo, Marshall, Mineola, Nacogdoches, New Braunfels, Schulenburg, Sinton; IN LOUISIANA—New Iberia, Opelousas; IN MISSISSIPPI—Gulfport, Laurel, McComb.

BEAUMONT

The Center of One of the South's Fastest Growing Industrial Areas

RICH IN RAW MATERIALS

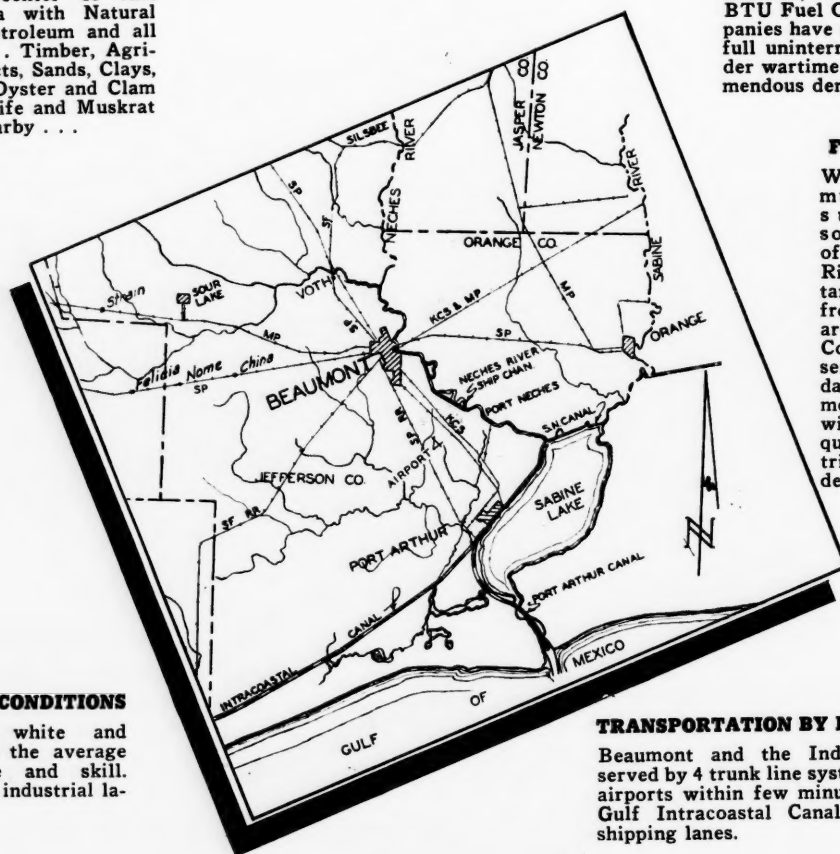
Beaumont is center of vast petroleum area with Natural Gas, Crude Petroleum and all by-products . . . Timber, Agricultural Products, Sands, Clays, Salt, Sulphur, Oyster and Clam Shell, Marine life and Muskrat Fur abound nearby . . .

DEPENDABLE FUEL & POWER

Electric, Natural Gas and high BTU Fuel Oil. Utilities companies have enviable record of full uninterrupted service under wartime conditions of tremendous demand.

WATER FOR EXPANSION

Water . . . from municipal plants; surface water sources consisting of Neches & Sabine Rivers with tributaries; ground water from drilled and artesian wells . . . Completion of conservation and power dams above Beaumont in early future will assure vast quantities for industrial expansion and development.



GOOD LABOR CONDITIONS

Native born white and colored, above the average in intelligence and skill. Long record of industrial labor peace.

TRANSPORTATION BY LAND, AIR & SEA

Beaumont and the Industrial Area are served by 4 trunk line systems. Two modern airports within few minutes drive of city. Gulf Intracoastal Canal and world-wide shipping lanes.

THRIVING METROPOLITAN MARKET

A market of 200,000 persons with per capita income in excess of \$1,000 . . . A wholesale and retail trade area of 16 counties in East Texas and 7 parishes in Southwest Louisiana . . . A \$600,000,000 Market Area, with population of 900,000 industrial, commercial and agricultural workers and their families . . . Population within 100 miles—1,225,000; 200 miles—3,900,000; 300 miles—8,800,000. By rail, air, highway, inland waterway, and ocean shipping, access is afforded to National and World markets.

EXISTING INDUSTRIES

Major industries include shipbuilding and repairs, petroleum production and refining and by-products, synthetic rubber production, rice milling, the manufacture of oil well machinery and equipment, lumber manufacturing, the production of chemicals, paints, and pharmaceuticals . . . supported by allied machine shops, foundries, sheet metal works, steel fabricating plants, welding shops and iron works.

CIVIC PROGRESS

Beaumont's civic and cultural progress has kept pace with its heightened business and industrial activity. Excellent schools serve an education-minded citizenship. . . . More than 50 churches representing all denominations testify that Beaumont has not neglected the spiritual side of its growth. . . . Fraternal and civic organizations play an important role in Beaumont's daily activities. . . . Two excellent daily newspapers and two radio stations serve the city and surrounding area. . . . For play there are 26 city parks covering more than 1000 acres.

CHAMBER OF COMMERCE - - - BEAUMONT, TEXAS

PORT OF BEAUMONT

**BACKED BY THE SOUTHWEST'S RICHEST MARKETING
AREA FACED BY THE SEVEN SEAS**

Because of its geographic advantages and nearby resources the use of THE PORT OF BEAUMONT as a shipping center and a location for factories or branches, distribution plants or warehouses, is of vital importance to industry. All industry will find it extremely advantageous to investigate what the Port has to offer in services.



Industrial, Commercial, Agricultural and Shipping Center Strategically located in the Great Gulf Southwest

A 34 FOOT CHANNEL TO THE SEA

TRAFFIC DEPARTMENT—A staff of traffic experts, specializing in every field of shipping is prepared to aid with precise information on any seaport—**FACILITIES**—Every modern facility provided to handle and warehouse all commodities—**BARGE TERMINAL**—The Intracoastal Canal gives the Port of Beaumont important advantage of short water routes to Gulf ports, and all Mississippi, Ohio, Missouri and other river ports of the Nation's industrial centers.

PORT COMMISSION



BEAUMONT, TEXAS

JULY NINETEEN FORTY-SIX



SHAPE!
A



INDUSTRIAL FUTURE

SHAPES UP
IN

PORT ARTHUR

TEXAS



GULF OF
MEXICO

Here's How!:

Plenty of cheap, clean natural gas available in an uninterrupted flow.

Deep water and barge transportation. (Low freight rates, too!)

A mild seashore climate; summer average 82°, winter average 58° means operating efficiency and no extra seasonal costs.

Endless natural resources; oil, sulphur, petroleum coke, clays, synthetic rubber, chemicals galore.

Efficient city-manager government. Low city tax rate. No state income or sales taxes.

31,000,000 potential consumers within 700-mile radius!

An available supply of skilled and unskilled labor.

Industrial sites with both railhead and deep water docks or either.

Power, generated by "natural gas to burn," is cheap.

Now in operation in this PROVEN industrial area are: world's largest synthetic rubber plant, some of the nation's greatest refineries, carbon plants, nylon plant, steel fabricating, shipbuilding, and many other industries totalling millions in investments.

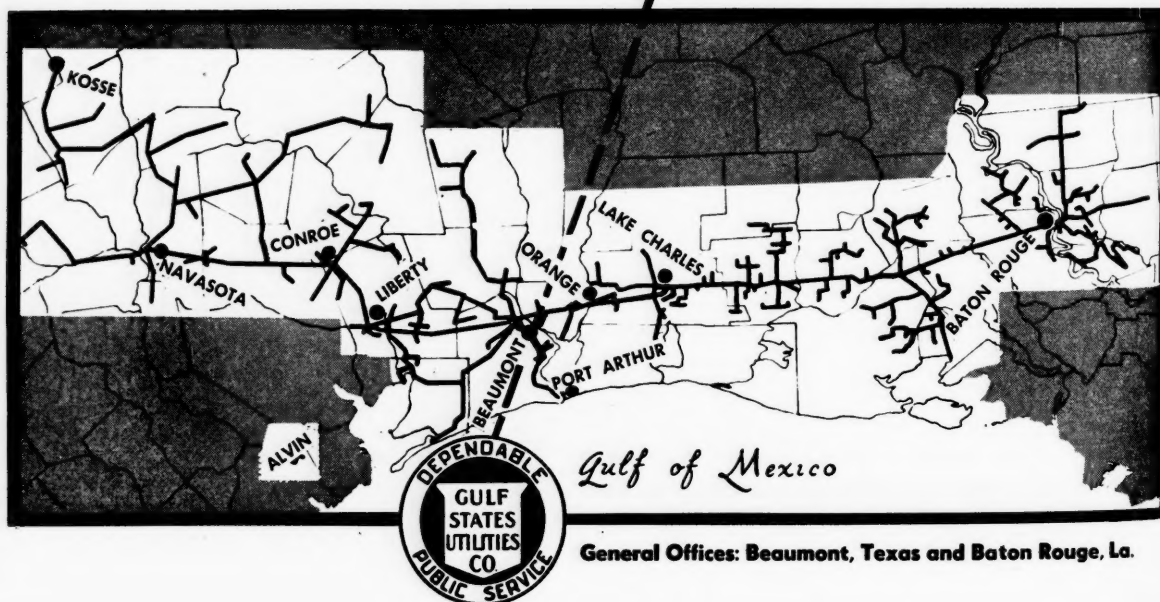
SHAPE up your industrial plans by writing today for a complete picture of advantages to be had in Port Arthur. If your plant is starting out, expanding or located disadvantageously, here is Opportunity!

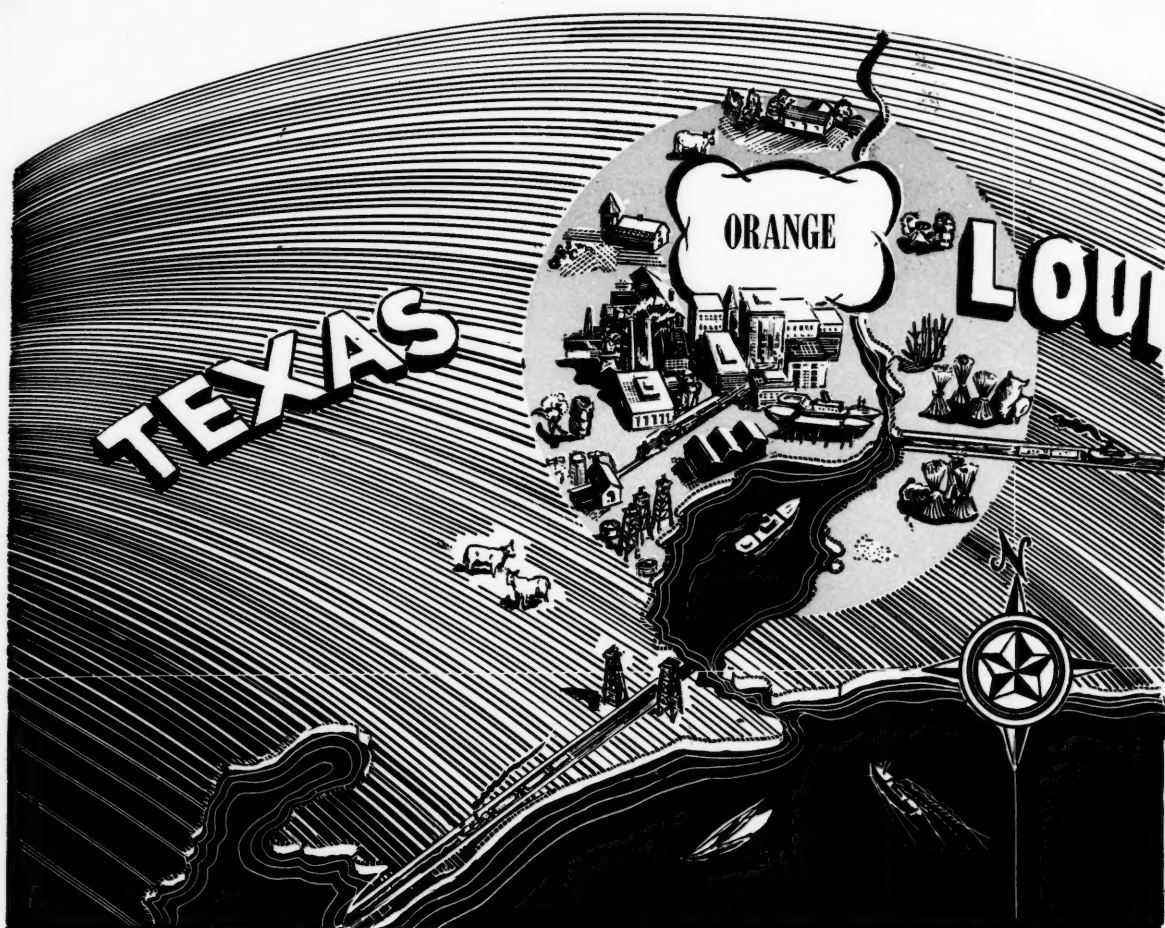
CITY OF PORT ARTHUR — PORT ARTHUR CHAMBER OF COMMERCE

Land of Opportunity



The territory pictured below, served by the transmission system of Gulf States Utilities Company, is rich in agricultural and industrial opportunities. Perhaps you, too, will find here just the combination of raw materials, native labor, and water, rail and air transportation facilities you are looking for





THE GATEWAY TO WORLD MARKETS

ORANGE is ideally situated both as to markets for its finished products and sources of supply for its manufacturing plants. Located on the Sabine River, with access to the Intra-Coastal Canal, two major railroad systems and the Old Spanish Trail, as well as other highways, it enjoys every transportation facility.

With great oil and gas fields at its back door and unlimited power and water, every requirement of industry can be met. Added to this is an abundant supply of both skilled and unskilled labor, with adequate housing available for more workers should they be needed.

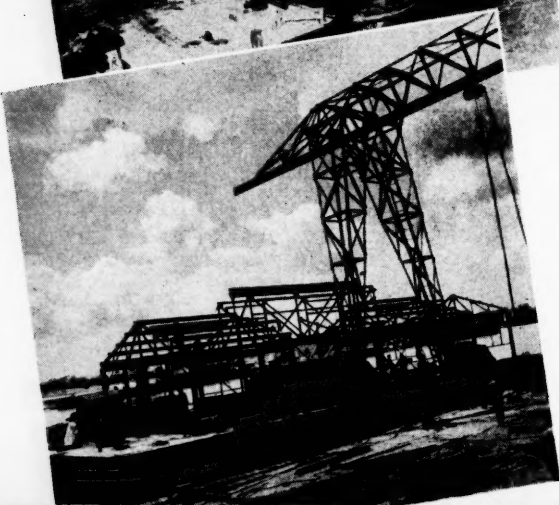
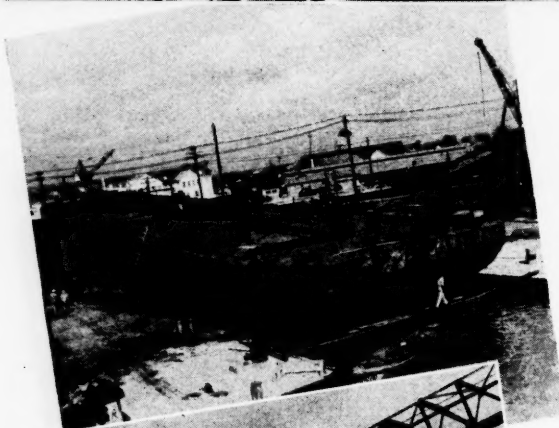
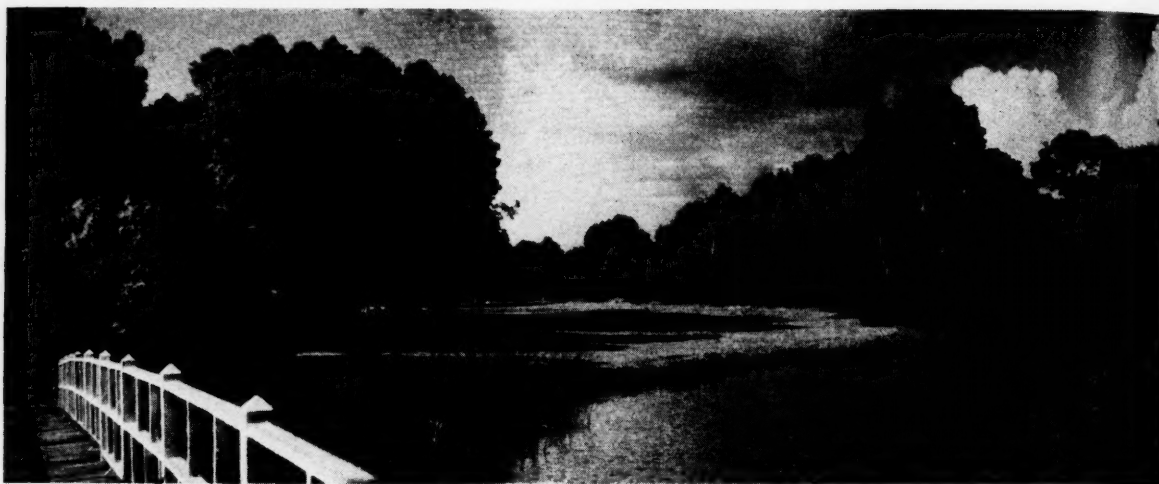
Mild climate and fertile lands create unlimited opportunities for agricultural production. Thousands of acres in the immediate area are producing bumper crops of rice. Truck farming is developing increasing profits for farmers and the canning industry. Livestock production is expanding rapidly, creating new opportunities for meat processing and dairy products.

Both hardwoods and pine grow in abundance throughout this section.

Sulphur, salt, clays, in addition to oil and gas, are found in close proximity to Orange and add to its advantages for great industrial expansion, with assurance of permanency.

ORANGE CHAMBER OF COMMERCE, ORANGE, TEXAS

Continued on next page



HEALTHFUL, HAPPY LIFE AT **ORANGE**

Picturesque in its setting, Orange has beautiful streets and drives, lined with attractive new homes. More than 7,000 pupils receive instruction in its modern schools. Tiger Stadium, recently completed, seats 5,000 and is part of the program of physical education carried on by the High School.

Churches of the various denominations occupy attractive edifices.

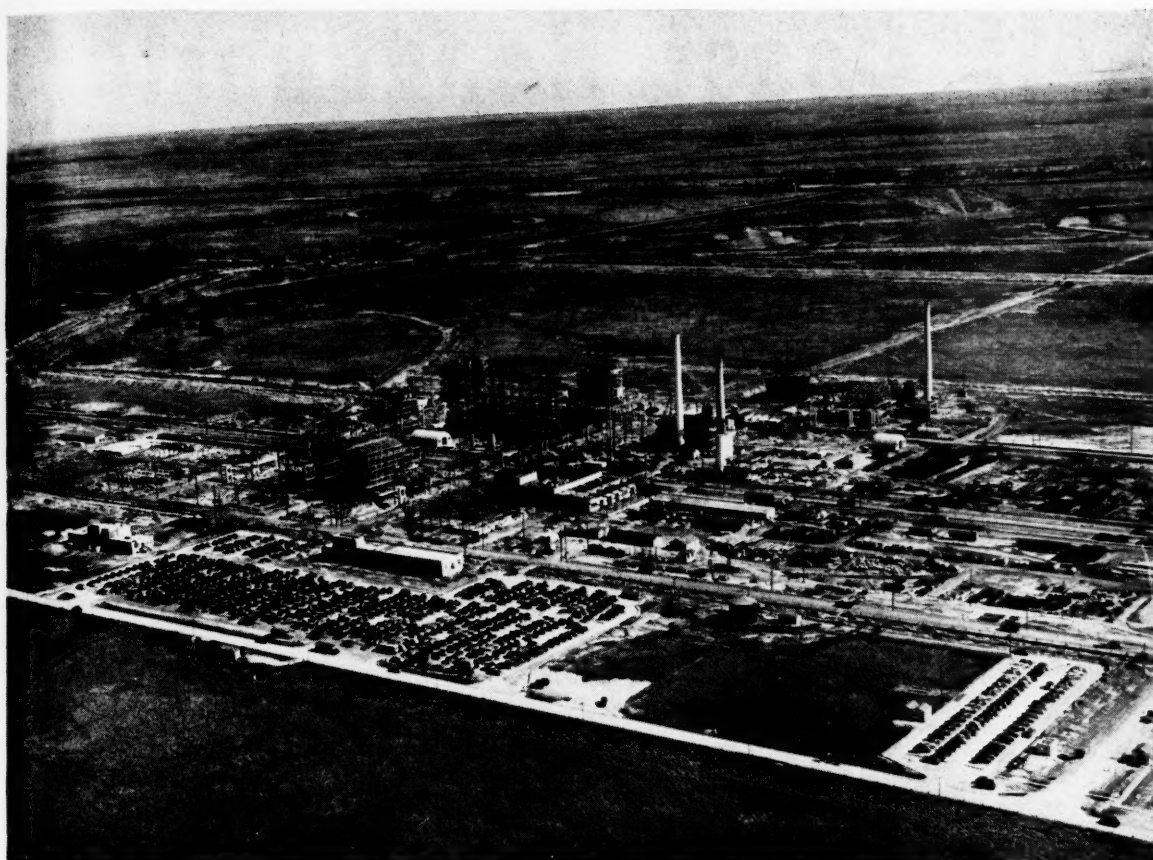
Recreational advantages include not only surf bathing and deep sea fishing, but one of the state's most attractive 18-hole golf courses, two gymnasiums and many children's playgrounds.

Truly, Orange is the ideal home city.

**ORANGE CHAMBER OF COMMERCE,
ORANGE, TEXAS**

Continued on next page





DUPONT SELECTS ORANGE FOR MAMMOTH NEW CHEMICAL PLANT

ORANGE, long noted for its importance as a shipbuilding center, enters upon a new era of industrial development, with the selection of this city as the site for the mammoth new Sabine River Works of E. I. DuPont de Nemours and Co., Inc.

In addition to building ships of all types, a large steel fabricating plant was located at Orange during the war. The permanence of this large industry is now assured with the expenditure of \$750,000 for installation of the most modern facilities known to the industry.

Other industries include a large creosoting works, a paper and paper-bag plant, a food canning plant, iron foundry, rice mill, oxygen plant, woodworking plant and other industries of wide diversity.

In selecting Orange for the multi-million dollar plant to manufacture Nylon Salts and other chemicals, the DuPont interests based their decision on the following factors:

- Tremendous supply of natural gas for manufacture of hydrogen and steam generation.
- Deep sea transportation accessible to fuel.
- Railroad facilities.
- Large supply of water and water-cooling facilities.
- Ample lands for expansion.
- Keen interest on part of leading citizens in securing industry and potentialities for development of community.

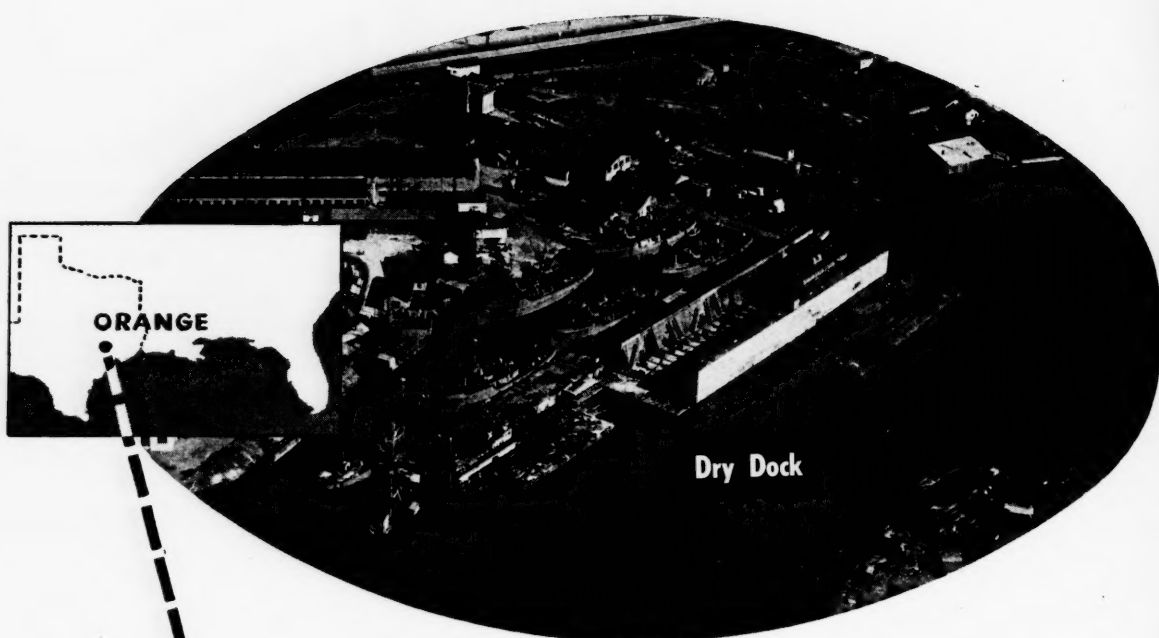
These factors enter into the profitable operation of every type of industry. Orange invites you to investigate its advantages.

Write for detailed information:

ORANGE CHAMBER OF COMMERCE ORANGE, TEXAS

Gulf Coast Headquarters

for tug and barge construction and repair



Aerial view of the Livingston shipyard on Sabine river at Orange, showing recently completed dry dock in foreground.

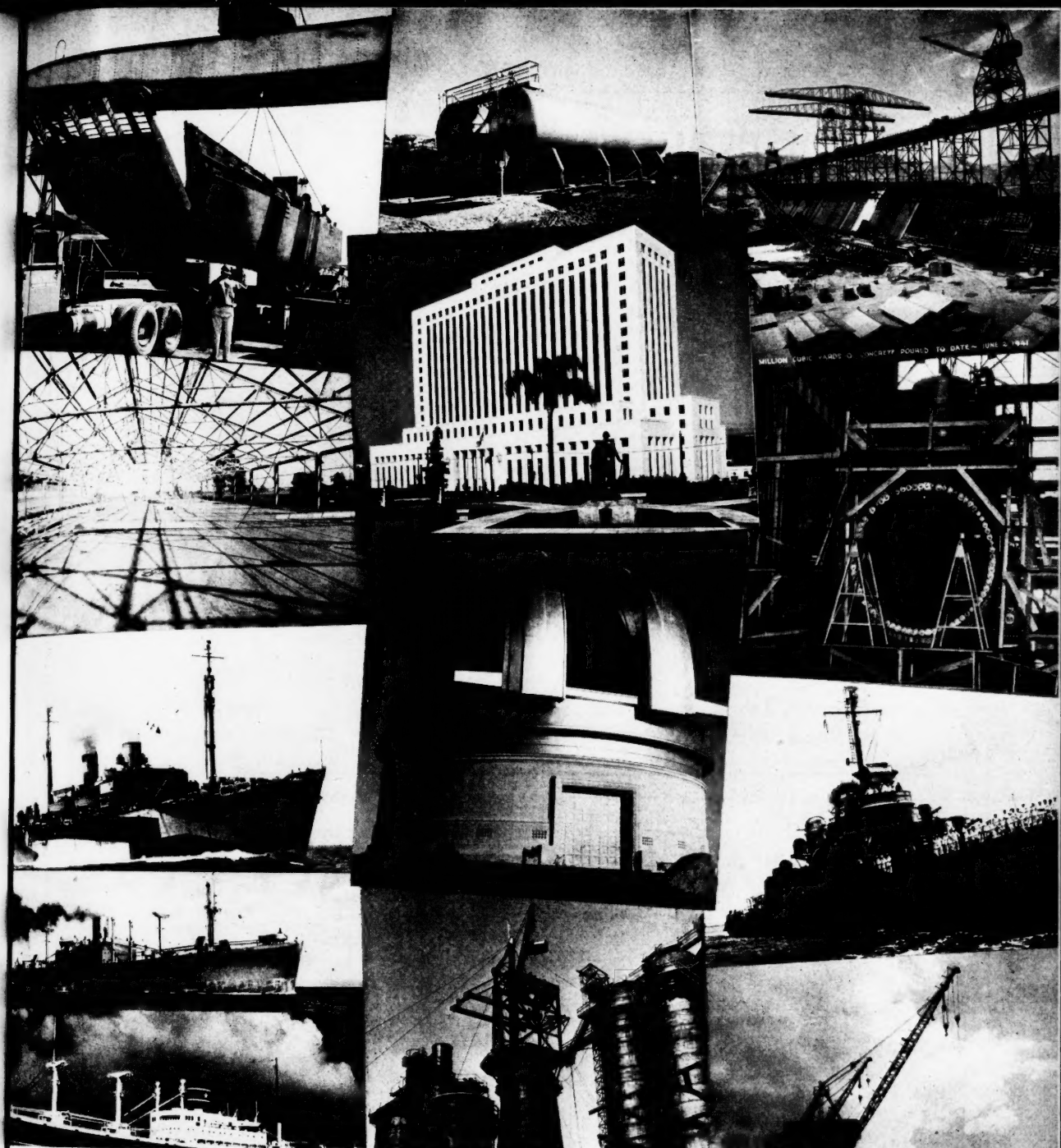
For more than two decades Livingston has specialized in construction and repair of tugs and barges and today the Livingston yard is widely known as Gulf Coast "headquarters" in that field. Expanded marine ways and the addition of a 3500-ton dry dock assure quick turn-around for the Gulf-Inland Waterways operators.

Livingston

SHIPBUILDING COMPANY

ORANGE, TEXAS

S



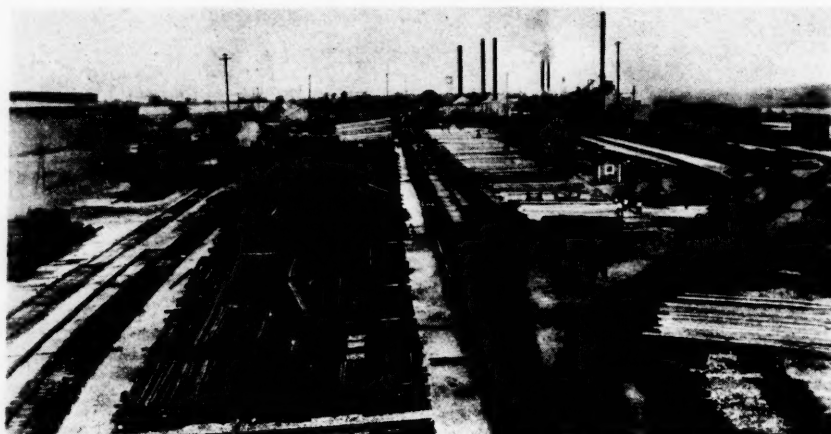
CONSOLIDATED STEEL CORPORATION

FABRICATORS • ENGINEERS • CRAFTSMEN

ORANGE, TEXAS ■ LOS ANGELES, CALIF

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R

"BLACK BEAUTY" CREOSOTED PRODUCTS



TEXAS CREOSOTING COMPANY

H. S. PETERSON, President

**Plants: Orange, Texas
Houston, Texas**

**Creosoted Poles, Piles,
Timbers, Crossties, etc.**

HIGMAN TOWING CO.

ORANGE, TEXAS



TRANSPORTATION OF BULK PETROLEUM



Labor and Management *Work Together Harmoniously* —at **ORANGE!**

ORANGE Metal Trades Council joins with the other business and civic interests of Orange in extending an invitation to industrial and financial executives to investigate the opportunities offered by this progressive city.

An abundance of skilled and unskilled labor, of highest intelligence, is available here. Labor is contented, because living conditions are ideal here. It is one of the few cities in the country where housing facilities are available. Ideal climate, good fishing and hunting, and fine churches and schools add to the city's advantages.

The excellent relationship between management and labor is attested to by not only the high production record during the war, but also because there were absolutely no strikes.

No matter what skills are required for the manufacture of your products, we can furnish you with workers.

ORANGE METAL TRADES COUNCIL

AFFILIATED WITH A. F. OF L.

109 FIFTH ST.

Labor Temple

ORANGE, TEXAS

"An Honorable Road to Fortune Lies Open"

These prophetic words about Texas were written 65 years ago by Governor Oran M. Roberts. He addressed them to the agricultural immigrant of that time; they can be repeated, with equal truth and added emphasis, for the benefit of today's expanding industry.

YOUR COMPANY, whatever it manufactures, whatever raw resources it requires, whatever the market in which it sells, will profit by building its new plant on the Texas Gulf Coast. For chemicals, for heavy and light metals, for food processors, for manufacturers of heavy equipment, for gadget makers, the Texas Coast Country offers unrivaled advantages of raw materials, transportation facilities, climate — and fuel.

Natural gas — abundant, efficient, economical, smokeless — is the fuel for Coast Country industry. Additionally, it supplies the hydrocarbons for a rapidly expanding chemical industry.

The honorable road to fortune lies open to you on the Texas Gulf Coast. Investigate. Send for a carefully engineered, specially prepared survey of what a Texas location can do for your company. There is neither cost nor obligation, and your inquiry will be kept in strictest confidence. Address Research Department, Houston Pipe Line Company, P. O. Box 2412, Houston 1, Texas.



HOUSTON PIPE LINE CO.
Subsidiary of Houston Oil Company of Texas

Wholesalers of **Natural GAS**



Waiting for You!

A SHARE OF A

HALF BILLION DOLLAR MARKET

The Corpus Christi retail market, comprised of 24 South Texas counties, containing 25,925 square miles, has an annual spendable income of approximately \$500,000,000. It comes principally from Industry, Agriculture (including Live Stock), Oil and Gas, and U. S. Navy Air Training at the largest establishment of its kind in the world.

No single region of the South or the Southwest is developing faster, or along more stable lines, than that area of Texas within a 100-mile radius of Corpus Christi. Population here has grown from 57,301 to 115,000 in five years. Increase in the territory has been far greater than the National average.

For 20 years the Corpus Christi area has been a "white spot" on the American business map. The opportunities for retail and wholesale selling are greater today than ever before. If you are looking for new outlets, by all means consider Corpus Christi, one of the Nation's major deep water ports.

WRITE CHAMBER of COMMERCE

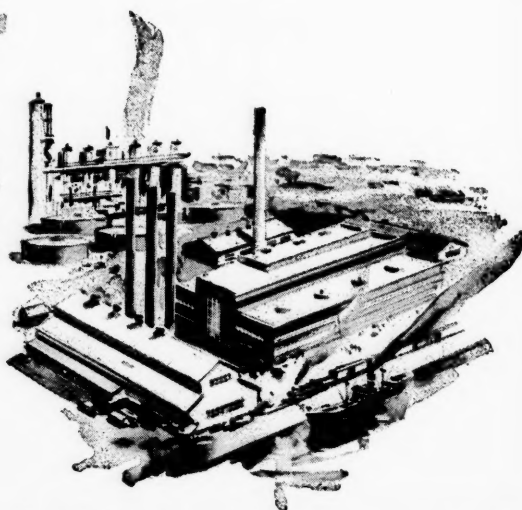
CORPUS CHRISTI





From Wartime
Requirements . . .

... to Speedy Peacetime
Industrial Development



DEPENDABLE

Natural Gas Service LEADS the WAY

The Texas Gulf Coast area has much to offer industry — superior transportation by land, water and air . . . raw materials right at hand . . . choice plant sites . . . manpower ready to go to work . . . ample financial services . . . favorable tax situation . . . desirable year 'round climate . . . and an abundant supply of natural gas, the modern fuel of today and tomorrow.

For two decades the Houston Natural Gas Corporation, as a gas distributing company, has rendered a service which has been an important factor in the development of Houston, the Southwest's largest city, and many other fast-growing communities, large and small, in 20 counties along the Texas Gulf Coast.

In the bustling Corpus Christi area, where Houston Natural service during the war years centered around meeting the varied and exacting fuel requirements of the huge United States Naval Air Training Station and its auxiliary flying fields, our company recently enhanced its peacetime position by acquiring the gas distribution lines of two other companies.

In addition, Houston Natural has constructed and put into operation a new large-size transmission line which taps tremendous company-owned gas reserves in South Texas and traverses some of the largest natural gas fields in the world. This new pipeline assures industries in the Corpus Christi area of an ample supply of fuel both now and for the future.

Today, industries along the Texas Gulf Coast benefit from the same dependable, unfailing gas service that won recognition for Houston Natural in meeting fully the needs of war. Although the emphasis now has shifted from wartime requirements to peacetime industrial development, the dependability of our service remains unchallenged.

Long operating experience coupled with financial stability places the Houston Natural Gas Corporation in a position to render the efficient, top-quality service so essential to industry, and, at the same time, to assume a role of cooperative leadership in a progressive industrial frontier where opportunity is unlimited.

HOUSTON Natural Gas SYSTEM

"A Texas Gulf Coast Service Institution"

FRANK C. SMITH, President

OFFICES — Petroleum Building, Houston - - - - - Nixon Building, Corpus Christi

78,000 SQUARE MILES of TEXAS

IN CORPUS CHRISTI'S FREIGHT ADVANTAGE TERRITORY



The PORT OF CORPUS is the transportation gateway to the most productive area of Texas.

Deep sea lanes, and the great and going Intracoastal Canal give Corpus Christi a direct water connection with the markets of the world and with the manufacturing centers of Middle America.

All services, interrupted by the war, are now returning to normal.

Merchandise warehoused here can be delivered overland to points of sale . . . in South or Southwest Texas, and in Mexico . . . at freight savings as high as 20 per cent, a de-

sirable advantage in a free, competitive market.

Three trunk-line railways, and several Class A motor freight lines enable you to make overnight delivery to most cities and towns.

The Port's over 500,000 square feet of sprinklered storage space, plus that offered by several bonded companies, offer adequate storage facilities.

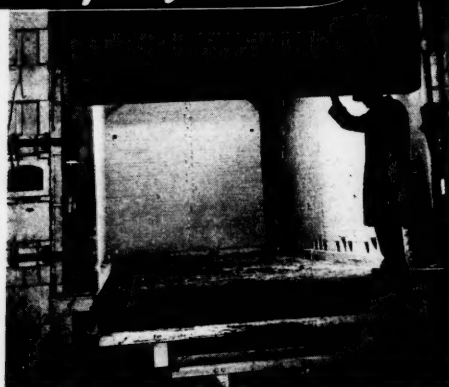
For information regarding services, or rates on any commodity, address THE NUECES COUNTY NAVIGATION DISTRICT, P. O. Box 1541, Corpus Christi, Texas.

THE PORT OF CORPUS CHRISTI

STRESS RELIEVING

±10° F.

to your Specifications



A NEW TESCO SERVICE TO GULF COAST HEAVY FABRICATORS

FURNACES throughout our new, modern heat treating department are capable of registering . . . and accurately maintaining . . . temperatures up to 2000 degrees F. Our gas-fired car-type furnaces . . . with a 7 foot clearance under the door, 9 feet wide, 25 feet long . . . are equipped with automatic recording pyrometers, designed to hold temperatures of the furnaces to a plus or minus 10 degrees F. . . to your specifications. We can furnish you with a furnace chart on each job which accurately describes the actual heating and cooling cycle.

Our equipment . . . first of its kind in the Gulf Coast . . . is designed especially for heavy pieces up to 15,000 lbs. Eleven vertical type hardening furnaces . . . 9 feet deep with a 6 foot inside diameter . . . are available for heat treating large pieces.

Texas Electric Steel Casting Company has specialized for nearly 20 years in making steel castings for the oil industry. The new heat treating department has more than doubled our facilities for Gulf Coast manufacturers.

If you have a heat treating or stress relieving problem on large or heavy equipment, let us discuss it with you. Write TESCO, Box 1418, Houston.

TEXAS ELECTRIC STEEL CASTING CO.

GOOD CASTINGS



HOUSTON, TEXAS

T E S C O

(Continued from page 16)

Our one source of progress is the savings of some 50 million thrifty Americans. These thrifty people who own the tools of production accumulate savings from what are erroneously called business profits. The right name for profits is "payments for the use of tools."

Unless these people are safeguarded in their right to receive legitimate, competitive earnings from their tools, they are not going to put their life savings into replacing old tools and installing new ones. The situation is so serious as to jeopardize the job security and pay, and the hope of future advancement of millions of working Americans. (See page 102).

According to a national survey of purchases in food super-markets conducted by the Market Research Section of du Pont's Cellophane Division, more than thirty-eight per cent of all food purchases are made on impulse. Covering such widely separated cities as Atlanta, St. Louis, Cincinnati, Minneapolis, San Francisco, Springfield, Mass., and Yonkers, the survey revealed that the items enjoying the greatest proportions of impulse buying were candy, cakes and cookies; dehydrated fruits, vegetables and soups; jams, jellies, relishes, spreads, macaroni and spaghetti, dessert mixes, cheese, frozen foods; and crackers, pretzels and potato chips. It's too bad this nation cannot confine its impulsive spending to its market basket.

One of the secrets of American industrial development is found in the inducement given by our patent system—inducement to invent—and to make—new and better products. It is through science and invention that new ideas are transformed into better goods and cheaper services. These better goods and cheaper services provide more jobs and more purchasing power enabling more people to buy goods. A patent does not take something from the public; on the contrary, a patent is a means for getting something from an individual and giving it to the public.

The Knoxville (Tenn.) *Journal* contains an interesting account of an application of the Wagner Act, that ignoble piece of legislation which restricts freedom of speech by employers when addressed to members of organized labor.

" . . . The National Labor Relations Board last week ruled that a Knoxville concern had been guilty of unfair labor practice.

"It developed that the unfair practice was this: On the day before a union election, the head of the manufacturing company had made a speech to his employees in which he referred to the heads of the union

(Continued on page 46)

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In The Service of Industry

THE Girdler Corporation, Louisville, Kentucky, through outstanding engineering and manufacturing achievements, has attained an enviable position in supplying, through its several divisions, equipment vitally essential to numerous important industries.

The Gas Processes Division designs and manufactures equipment for the production, purification, separation reforming and dehydration of various gases for oil companies, gas producers, chemical manufacturers, manufacturers of dry ice, etc.

The Votator Division designs and manufactures continuous closed cooling and heating equipment known as the Votator, which is a highly efficient heat transfer mechanism used in the processing of vegetable shortening, margarine, lard, starch,

chemicals and other products.

Thermex Division is engaged in the development and manufacture of high-frequency equipment used in heating non-metallic materials by what is known as "Electronic Heat". This equipment is used in many fields, including the bonding of plywood, pre-heating of plastic compounds, etc.

In addition, Girdler owns one-half interest in Tube Turns, Inc. This company produces seamless welding fittings for pipe through a process of reforming pipe under heat and pressure and retaining the same wall thickness both at the inner and the outer arc.

New markets, new applications and new improvements are constantly being sought and realized by all Girdler divisions.

Another advertisement in the series by Equitable Securities Corporation featuring Southern developments. Equitable has helped to finance many Southern companies, is ready to do its part in supplying others with capital funds.

NASHVILLE
ATLANTA
KNOXVILLE
BIRMINGHAM
NEW ORLEANS

EQUITABLE

Securities Corporation

NEW YORK
MEMPHIS
HARTFORD
GREENSBORO
CHATTANOOGA

BROWNLEE O. CURREY, President.

322 UNION STREET, NASHVILLE 3, TENN.

TWO WALL STREET, NEW YORK 5, N. Y.

Bring your financial problems to Equitable

Many problems incident to the post-war period can be solved only through major readjustments, which oftentimes require investment of additional capital.

Equitable Securities Corporation, one of the nation's largest investment houses, is ready to supply sound Southern corporations with such funds as may be needed.

For discussion of specific financial problems, executives of Southern corporations are invited to contact us through the nearest Equitable office.

NASHVILLE
ATLANTA
KNOXVILLE
BIRMINGHAM
NEW ORLEANS

EQUITABLE Securities Corporation

NEW YORK
MEMPHIS
HARTFORD
GREENSBORO
CHATTANOOGA

BROWNLEE O. CURREY, *President.*

322 UNION STREET, NASHVILLE 3, TENN.

TWO WALL STREET, NEW YORK 5, N. Y.

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HOUSTON



Port is Gateway to World Markets

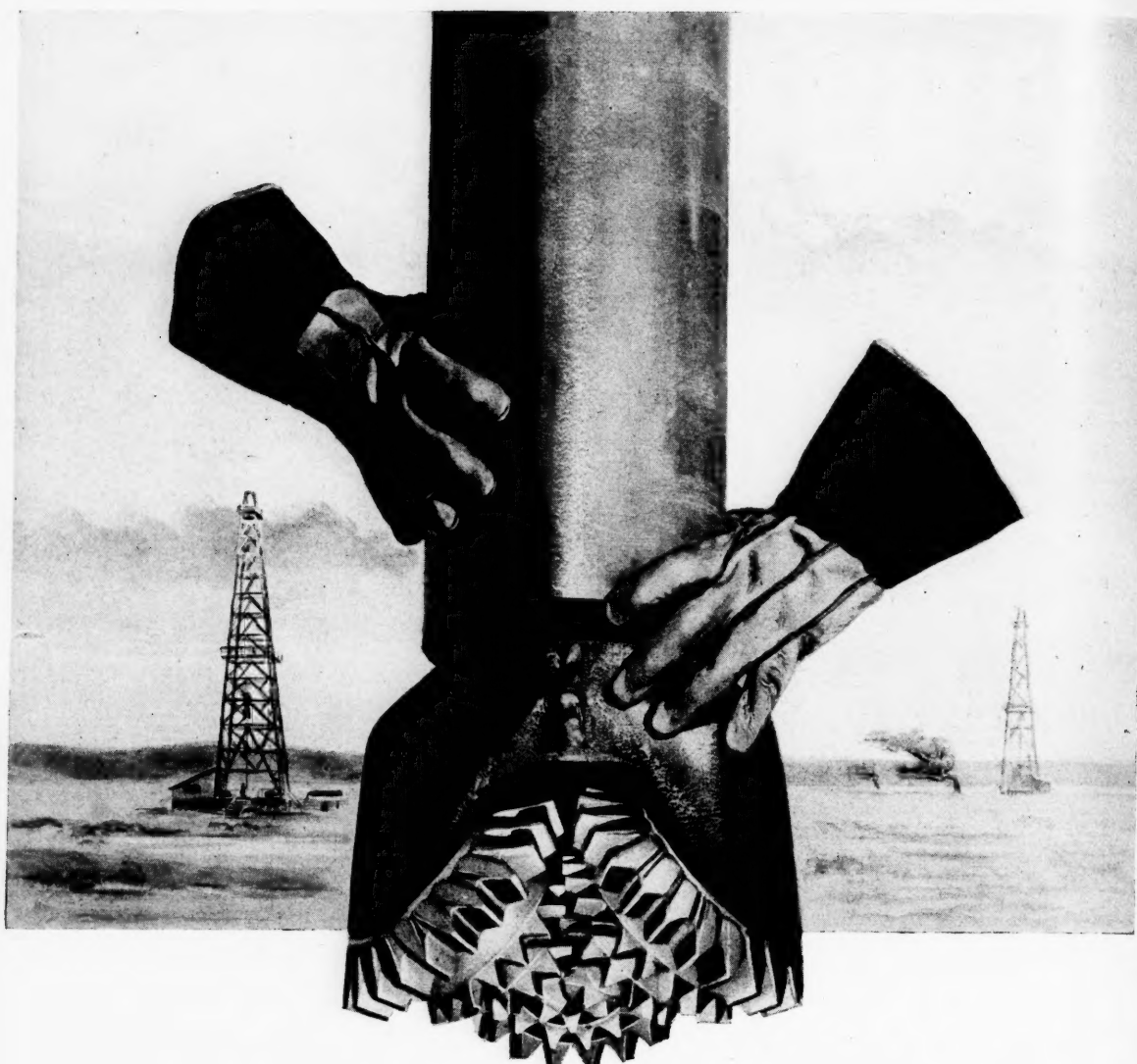
The port of Houston ranks among the greatest in the country in world commerce. Its principal exports of cotton, petroleum products, rice, wheat and other grain products, metals and cottonseed cake move in large volume. Import commodities include green coffee, bagging, ores, wood and paper products.

The Houston Ship Channel begins at the Turning Basin four miles within the city limits and extends for 50 miles to the open waters of the Gulf of Mexico. It is 34 feet deep, has all modern port facilities and berthing space for 80 ocean-going vessels. It sends commerce to all ports of the world. The channel is lined with huge and varied industrial plants valued at \$600,000,000, including oil refineries, synthetic rubber plants, petroleum products plants,

chemical plants, steel mills, ship construction and repair yards, paper and cement plants, grain elevators, iron and steel fabricators, cotton compresses, oil tool plants, and many others. Before shipping was dislocated by the war, *Houston ranked as the third highest deep sea port in the nation in total tonnage handled.*

Houston is the largest city in the Southwest and one of the South's greatest industrial centers, with a well-balanced economy. It is one of the fastest growing cities in the country. Population, public utility estimate, January 1, 1946: corporate limits 475,000; Greater Houston 540,000; Metropolitan Houston, embracing most of Harris County, 610,353.

HOUSTON PORT INTERESTS



THE BUSINESS END . . . *of your Investment !*

The success of your drilling investment depends in large measure on the performance of the rock bits used. The superior performance of Hughes specially-designed Rock Bits has made them the decided preference with operators the world over

Sound design, quality materials and expert workmanship are rigid specifications that assure you faster, straighter full-gage hole . . . more footage per round trip, when you use HUGHES . . . for over thirty-five years



Hughes

TOOL COMPANY

HOUSTON, TEXAS

Standard of the Industry

In Texas— HOUSTON IS FIRST

- *First* in population
- *First* in number of industries
- *First* in industrial payrolls
- *First* in seaborne tonnage

WHY? Because Houston enjoys a combination of natural advantages unmatched by any other city in the state.

Oil, cotton, lumber, chemicals, agricultural products from a rich hinterland, finished manufactures of increasing variety—all these and more contribute to Houston's population growth and industrial stature.

And the surface has barely been scratched. Rich, untapped reserves of every needed resource lie all about. For fuel, nature has provided abundant, inexpensive natural gas; for climate, 12 months of mild weather. Skilled and unskilled labor is plentiful; and recently-begun production of metal, light and heavy, rounds out Houston's industrial facilities.

First National Bank in Houston, serving business and industry for over 80 years, invites your attention to Houston as an ideal location for the production, distribution or marketing of your products. Write us for information on any phase of business or industrial activity in Houston.

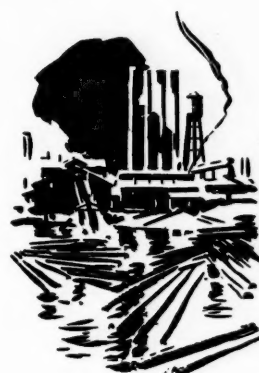


First National Bank

in Houston

MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

JULY NINETEEN FORTY-SIX

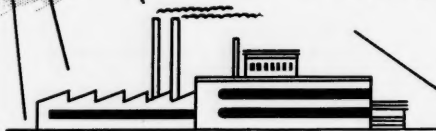


**SOUTH
TEXAS
COMMERCIAL
NATIONAL
BANK**

OF HOUSTON



CONSISTENT PROGRESS ... *through Cooperation*



The SOUTH TEXAS BANK, during its sixty years existence, has seen the City of Houston grow to economic supremacy as the business and industrial center of the great Southwest, and is proud to have played an important part in this development. As a financial institution, our co-operation in this consistent growth has encompassed all the enterprises that are creating this progressive area.

In anticipation of even greater business and industrial banking requirements, we continue to expand our facilities . . . thus voicing our confidence in the future development of a city, a state, and a nation.



SOUTH TEXAS COMMERCIAL NATIONAL BANK

OF HOUSTON

MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

East Texas Electric Steel Co., Ltd.

P. O. BOX 2469

LONGVIEW, TEXAS



Sound Steel Castings

TO

P. O.

More and more oil field equipment manufacturers are specifying castings bearing this tag . . . it's their assurance of a Sound Steel Casting.

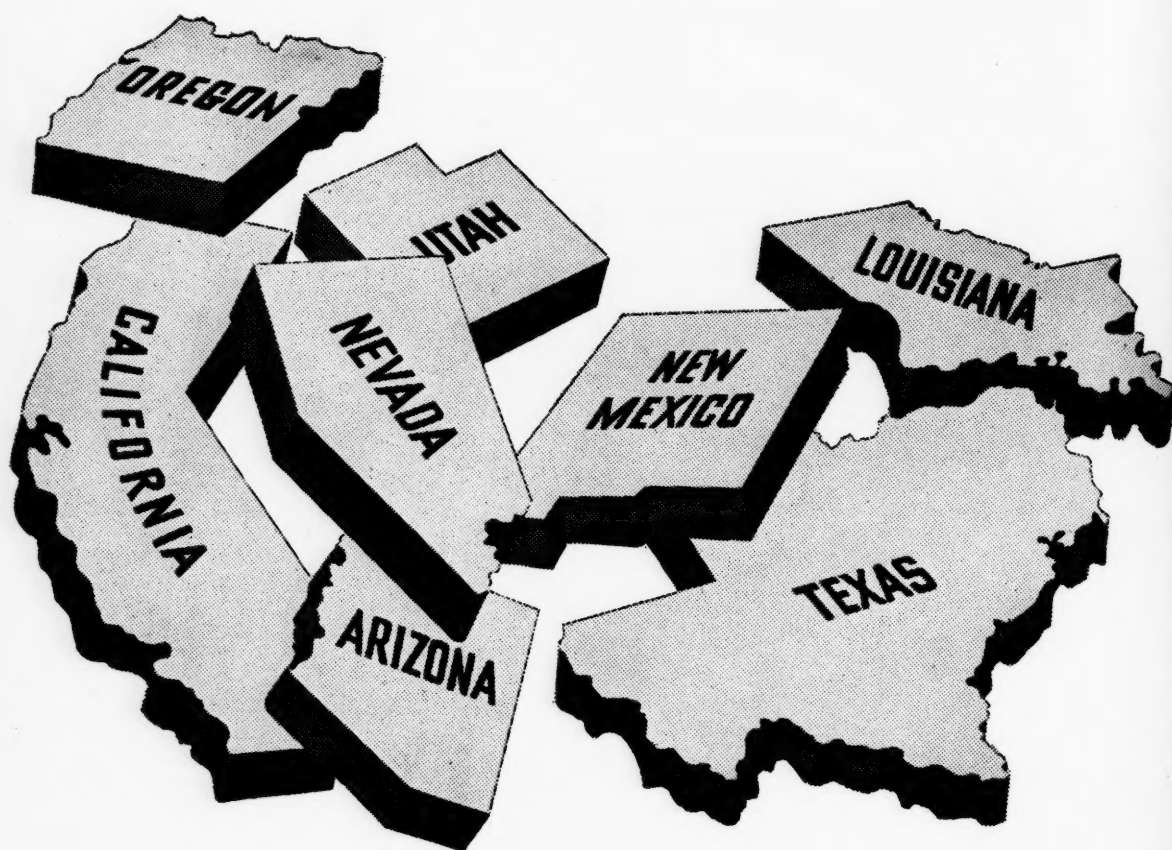
WEBSTER SAYS: Solid in structure, also firm in texture, stable. Free from flaw or defect, undamaged or unimpaired.

EAST TEXAS

ELECTRIC STEEL CO., LTD.

Fort Worth • Longview • Houston
(Plant)

Stepping Stones To Present and Future Markets



PICTURED above are the eight Southwestern and Western States served by Southern Pacific's 15,000-mile network of rail lines. As a pioneer railroad, Southern Pacific has been an important factor in the industrial development of these states, which is now gaining momentum and will have an important effect on the prosperity of this great empire West of the Mississippi River.

Southern Pacific serves twice as many communities in the Southwest and West as any other railroad, and many of these points exclusively. If you do business in any of these eight states, the chances are two to one you will be served by our rails.

In Texas and Louisiana alone we operate 4,429 miles of line, a big railroad system in itself. And our rails directly serve every important Gulf port.

So, with the expected future development of markets in Asia, Mexico, Central and South America and the further industrial development of the states we serve, Southern Pacific will play an important part in the increased import and export traffic through Gulf ports.

Southern Pacific's facilities were greatly increased and strengthened to handle our tremendous war load. We plan to go forward aggressively and progressively with further improvements now that peace has come. This increased capacity and these improved facilities will be at your service in a constructive way—to help you in your business and your future plans.

We have just prepared a colorful eight-page brochure, sketching briefly the amazing resources of the areas we serve. We think you will find it interesting and a copy will be sent you on request.

F. L. GORDON,
Freight Traffic Manager.
913 FRANKLIN AVENUE,
HOUSTON 1, TEXAS.

S. P.

The friendly Southern Pacific

MANUFACTURERS RECORD FOR

Facts YOU SHOULD KNOW ABOUT Houston



Many leading economists believe that Houston is on the threshold of one of the most dramatic periods of industrial and commercial expansion in American history. All facts and factors confirm their prediction.

The population of Houston has doubled every 12 years, on the average, since the first census in 1850.

Houston is one of the leading transportation hubs of the South, served by 18 railroads,

six airlines and six national interstate highways. It is also a major deep sea port.

Over 75% of all new chemical plants built in the United States in recent years were located in the Houston area.

Approximately 20% of our national investment in synthetic rubber has been spent in the Houston area.

Houston is the commercial and financial center of a state which (1) produces nearly half

of all U. S. oil; (2) ranks first in cattle producing and is fast developing a major meat packing industry; produces 80% of the nation's sulphur and a like percentage of the nation's vital carbon black.

Houston has an ample supply of skilled labor—an enviable labor relations record—and an adequate supply of power.

Houston has a date with Destiny, and everything it takes to keep its appointment.

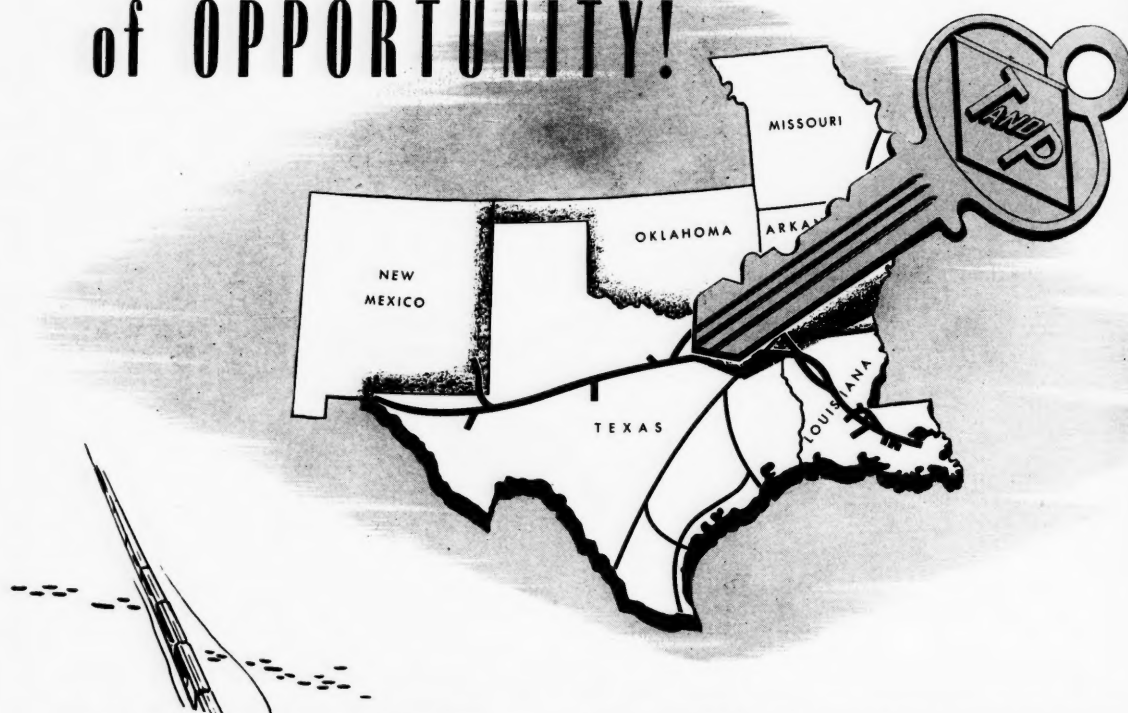
Facts YOU SHOULD KNOW ABOUT THE SECOND NATIONAL BANK

The Second National Bank of Houston is a strong, progressive and friendly institution equipped to render every type of financial service, and dedicated to the progress of the region in which it serves. Its capital assets exceed \$11,000,000.

The officers of this bank will be glad to provide you, in strictest confidence, with any information that may help you to appraise the value of Houston as the site of headquarters or branch operations.



Unlock the Southwest's Door of OPPORTUNITY!



**FOR INFORMATION ABOUT
PLANT SITES ON THE
TEXAS AND PACIFIC**

Write or phone R. C. Griffith, Land and Industrial Commissioner, 1009 Texas and Pacific Building, Dallas 2, Texas. All inquiries will be treated confidentially.

LOCATE YOUR PLANT IN THE HEART OF AN \$ 8 BILLION DOLLAR MARKET

If you are decentralizing, relocating or starting an industry—Texas-Louisiana offers you a market with a potential buying power of eight billion dollars.

This vast area has no close rival in volume, quality and diversity of natural resources. Its climate makes living and working enjoyable the year round. Labor is intelligent and sharpened by war-time skills. Here, too, is cheap, abundant power. Location in the Texas-Louisiana area also puts you next door neighbor to an additional four billion dollar Latin American market.

The Texas and Pacific, a dominant factor in the development of this area, is ready to work with industry for plant sites in Texas or Louisiana. Yes, let us help you to unlock the Southwest's door of opportunity.

W. G. VOLLMER, President

THE TEXAS AND PACIFIC RY.

1871 — DIAMOND JUBILEE — 1946

Celebrating 75 Years of Service

DALLAS, TEXAS



MANUFACTURERS RECORD FOR

YOU SAVE MONEY FOR YEARS TO COME

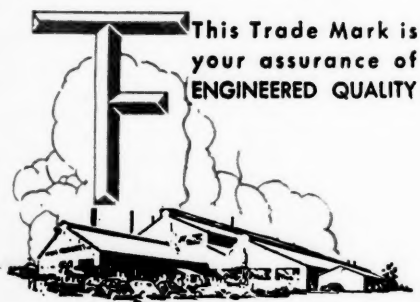


... by giving special attention to selecting metals when your products are in the drawing board stage

There is no better time than right now to consider these important advantages of Texas Foundries' American Malleable.

Call in our engineers for consultation when your products are in the drawing board stage. Their experience may be valuable to you in the way of suggestions for saving you money for years to come.

- 1** American Malleable requires less finish allowance as it can be cast to closer tolerances.
- 2** American Malleable can be machined faster than any other ferrous metal of comparable tensile strength, because of its controlled chemical properties and proper heat treating.
- 3** Designers can save metal and secure greater strength because American Malleable has a high ratio of yield strength to tensile strength and because of its shock resistance.
- 4** Cold straightening, shaping, and coin pressing to exact dimensions to eliminate machining are possible because of the high ductility of American Malleable.



TEXAS FOUNDRIES

Organized for Service

L U F K I N , T E X A S

JULY NINETEEN FORTY-SIX

FROST PINE *looks* ahead with TEXAS

Frost Pine operations at Jasper, Nacogdoches and Waskom have contributed in a major degree to the development of these enterprising Texas communities.

Today Frost Pine forests, growing under a comprehensive program of reforestation, are on a sustained yield basis, maturing recurring crops for Texas' homes and industries of tomorrow.

Such a program, augmented by Frost's large scale manufacturing facilities, assures continued contribution and parallel growth for generations to come.



"Although the people support the Government, the Government should not support the people".

A typical growing crop of Frost Pine timber. In some forest areas, up to seven crops have been harvested from the same land.

FROST LUMBER INDUSTRIES, Inc.
Shreveport, Louisiana

(Continued from page 34)

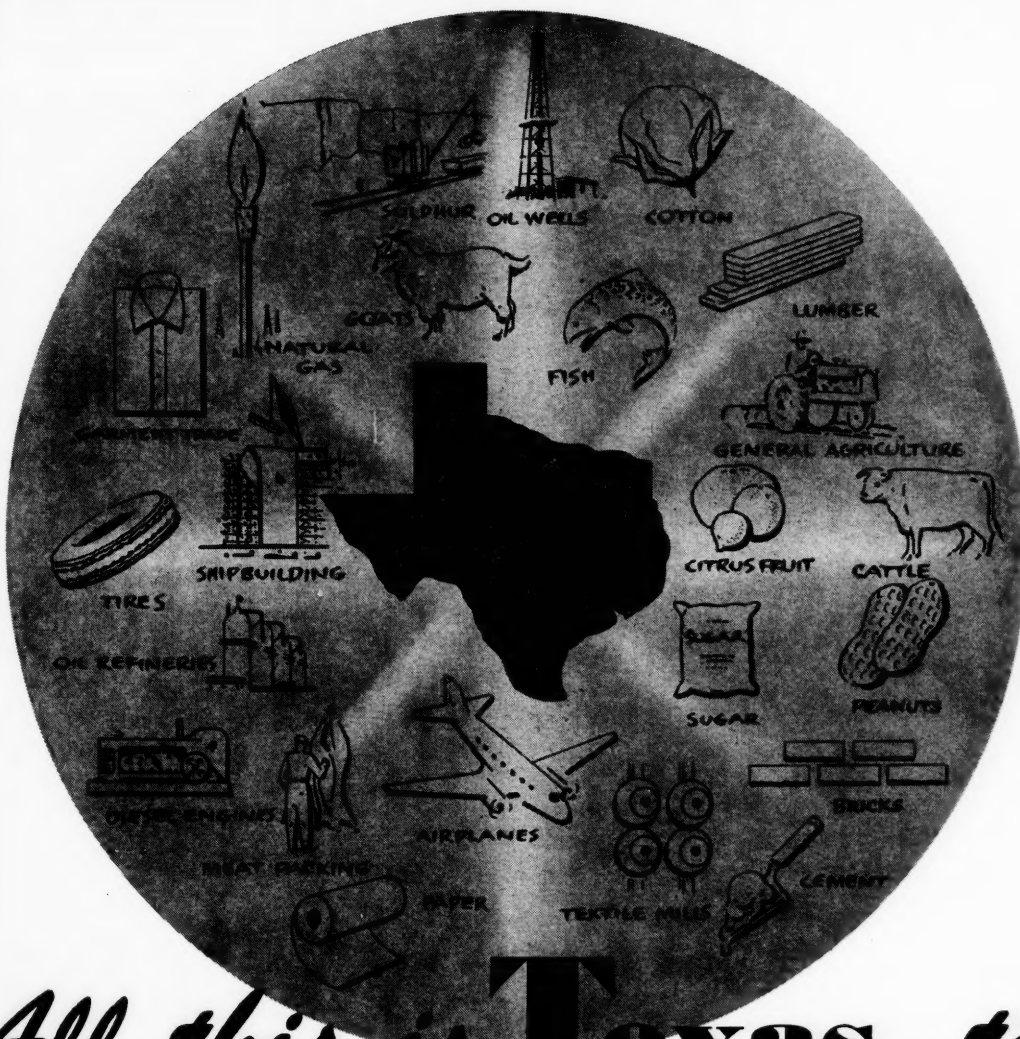
upon which they were to vote as 'Communists and foreigners.' He was talking about Sidney Hillman and Jacob Potofsky, officers of the union, and said 'he was afraid of these men and believed the employees would be afraid of them if they knew them.'

'This was 'unfair' in the judgment of the NLRB. That man who was the head of a big concern could talk business with his employees and express any judgment he wanted to. He could talk religion with them, and express any conviction about God Almighty that he wished to. But when he breathed an adverse opinion of Sidney Hillman, head of the CIO-PAC, and expressed the almost universal conviction that Hillman is at least a fellow-traveler and at worst an outright Communist, then the head of that concern was guilty of unfair labor practice. Regardless of Constitutional guarantees of free speech, he mustn't express such an opinion to his own employees. Incidentally, he mustn't speak harshly of Mr. Hillman even though union organizers had unquestionably led his people to believe, in the course of their membership drive, that the company they worked for was headed by little less than criminals.'

In the following table, the national debt is prorated according to population among the sixteen Southern states. Check the figure for your state and see how it compares with your state's annual budget.

State	Popula- tion	Percent of Nation	Share of Nat'l Debt
Alabama	2,832,961	2.1%	\$ 6,300,000,000
Arkansas	1,949,387	1.4%	4,200,000,000
Florida	1,897,414	1.4%	4,200,000,000
Georgia	3,123,723	2.4%	7,200,000,000
Kentucky	2,845,627	2.1%	6,300,000,000
Louisiana	2,363,880	1.7%	5,100,000,000
Maryland	1,821,244	1.3%	3,900,000,000
Mississippi	2,183,796	1.6%	4,800,000,000
Missouri	3,784,664	2.8%	8,400,000,000
North Carolina .	3,571,623	2.6%	7,800,000,000
Oklahoma	2,336,434	1.7%	5,100,000,000
South Carolina .	1,899,804	1.4%	4,200,000,000
Tennessee	2,915,841	2.2%	6,600,000,000
Texas	6,414,824	4.8%	14,400,000,000
Virginia	2,677,773	1.9%	5,700,000,000
West Virginia ..	1,901,974	1.4%	4,200,000,000
Total South ..	44,254,464	33.3%	100,000,000,000
Total Nation	131,669,275	100%	300,000,000,000

George L. Googe, head of the AF of L's southern drive and a man destined to become as popular in the South as were some of his post-Civil War predecessors, has stated that he expects Southern businessmen to play "strictly according to the rules" during the organizing campaign. This one wins the fur-lined chamber pot. It is, in fact, about on a par with Hitler claiming that England violated international law by shooting at German parachutists as they descended.



All this is **Texas,** *too*

The solitary supremacy of cattle and oil in Texas is giving way. Each year new industries establish here to benefit from Texas' advantages. And each year more and more industrial newcomers turn to Republic National Bank of Dallas. Republic's capital structure of twenty million dollars, largest in the South and Southwest, Republic's active Foreign Department and

market "know-how" have made Republic the bank for the modern, progressive-minded industries now establishing in Texas. If you are contemplating a move to Texas or if you are merely intrigued by Texas possibilities, a letter to Republic will place the experience and facilities of this bank at your disposal.

REPUBLIC

NATIONAL BANK of DALLAS

Capital and Surplus \$20,000,000



Largest in the Southwest

JULY NINETEEN FORTY-SIX

THE *Last* FRONTIER FOR INDUSTRY



Ask about **Industrial Opportunities in** *the Southwest*

A great regional market of 17,000,000 persons . . . \$13,000,000,000 annual income . . . a wealth and variety of resources that guarantee continued growth . . . economic stability.

Here, truly, is America's *last industrial frontier* . . . manufacturing less than 20 per cent of the goods it consumes! To men of vision it is the Nation's No. 1 land of opportunity . . . for new plants to serve its needs from within.

The Mercantile's Industrial Service Department works with new enterprises . . . provides full and accurate information, aids in securing buildings or sites, assists in many other ways. Its services are available upon request.



**MERCANTILE
NATIONAL BANK
AT DALLAS TEXAS**

Member Federal Deposit Insurance Corporation

**This Book FREE
to Executives**



Write today for *The Last Frontier*, 48 pages of vital facts . . . maps, charts, tables, photographs . . . that tell the story of this great market at a glance.



Throw Your Loop Over This One, Pardner

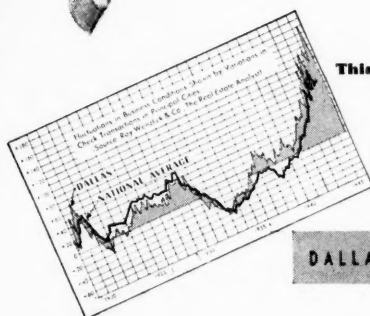


TIE into a **FORTIFIED** market in the most rapidly developing agricultural and industrial region of the nation—a market of 17 million consumers, with \$13 billions spendable income annually.

No business lag can touch all its diversified crops, industries and resources at once. Major depressions are short-lived in this *fortified* market which has always led the nation with its rapid and complete recovery.

In this vast region you can enjoy an almost depression-proof economy. Unfavorable crop season in one area is always compensated by bountiful yield in another. Income is sustained, not by just one or a few, but by many different resources, crops and industries.

Industry's eggs are never all in one basket in the **FORTIFIED** market of the Dallas Southwest.



This business fluctuation chart shows how the Dallas Southwest has led the march to recovery in depression years. In the book "The Dallas Southwest" you will find 64 pages of solid reasons why this amazing region, with its barely tapped natural resources, is truly America's **FORTIFIED** market. Send for your copy now.

DALLAS CHAMBER OF COMMERCE, DALLAS 2, TEXAS



TEXAS is on the march **INDUSTRIALLY**... driving forward under full power to provide more jobs and continuing opportunities for its people. During war years, Texas demonstrated its industrial capacity and capability when its industries fulfilled \$6,418,810,000 worth of war contracts involving the production of planes and parts, explosives, synthetic rubber, steel, magnesium, gasoline, oil, and a long list of other materials and supplies requiring skilled labor.

During the war years, Texas' industrial production rose from \$450,000,000 annually to two and one-half times that amount on war contracts alone. This has resulted in expansion of plant facilities and labor force, and peace-time plans which call for even greater industrial production than during the war.

As rapidly as building materials and machinery become available, Texas cities and towns are witnessing the building of new and the expansion of existing factories and shops. Texas has everything needed by and

for industry... an abundance and diversity of raw materials and natural resources for converting into manufactured products, mild climate, excellent transportation facilities, highly intelligent and easily trained native labor... and abundant cheap electric power. Furthermore, Texas is the gateway to the Latin Americas, whether by land, by sea or by air.

By the processes of reconversion and by wise and careful planning, Texans are determined to make the most of their state's vast resources.

The Texas Power & Light Company system serves that vital area of Texas which is the geographic and economic hub of the great and growing Southwestern Market Area. This Company, a pioneer Texas institution, invites the immediate attention of American industrialists to the rich and varied opportunities offered by the Lone Star State. Specific data supplied in response to inquiries.

Address communications to the Executive Department, 728 Interurban Building, Dallas

TEXAS POWER & LIGHT COMPANY

JOHN W. CARPENTER, *President and General Manager*



Materials! . . . Manpower! . . . Markets! Here in Texas are all three . . . vast in quantity . . . rich in quality . . . all grouped together as if by nature's design. Here industry is still underdeveloped. Here competition is less intense.

For processing and manufacture, no comparable area in the world yields such volume of crop, livestock, forest and mineral products. Texas agriculture alone produces more than 1¼ billion dollars; mineral products, including oil, total a billion more, annually.

Workers in Texas are intelligent, willing, cooperative. Eighty-two per cent are native white. Texas is a healthy "climate" for industry; a temperate zone both geographically and in the nature of its people.

Of American city market areas, listed by a Census authority as: "Having the best prospects for continuous post-war growth," 15 are in the South. Of these fifteen 5 are in Texas alone.

Texas is a rich market . . . now 7 million prosperous consumers. The Southwest, five-state-market, most strategically served from Texas, represents nearly 10 million more.

Total combined buying power: 12 billion dollars annually.

Texas is the cross-roads of world airways. Served also by a vast network of magnificent truck-line highways, railways, and by sea-ports handling 16 per cent of the nation's water-borne commerce.

Texas is rich. Texas is hospitable. Texas is still comparatively a "milk and honey land" of opportunity for industry. Investigate Texas.

Texas

NO
STATE TAX
INCOME
OR
SALES

PUBLICITY COMMITTEE

of 10th DISTRICT ADVERTISING FEDERATION of AMERICA

MARVIN C. LUNDE, Chairman

NOTE: Texas properly boasts of many things. But state sponsored research, advertising and publicity as a service to opportunity-seeking, outside enterprises is not one of them. This Committee's function is to crystallize progressive public sentiment to secure funds for such purposes, through necessary legislative action. Chambers of Commerce in cities listed below have been invited to support the movement. We are indebted to Manufacturer's Record for this complimentary page advertisement.

★ Source population figures: TEXAS ALMANAC 1945-1946

OVER 100,000	Galveston	Paris	Del Rio	McKinney	5,000 TO 10,000	Coleman	Henderson	Mexia	San Marcos
Austin	Port Arthur	San Angelo	Denison	Midland	Alamo Heights	Colorado City	Hillsboro	Mission	Seguin
Corpus Christi	Waco	Sherman	Denton	Mineral Wells	Alice	Commerce	Huntsboro	Mt. Pleasant	Stamford
Dallas	Wichita Falls	Texarkana	Gainesville	Orange	Baytown	Crystal City	Jacksonville	Nacogdoches	Sulphur Springs
El Paso		Tyler	Goose Creek	Palestine	Beeville	Cuero	Kerrville	Navasota	Taylor
Fort Worth	20,000 TO 50,000	Victoria	Greenville	Pampa	Bonham	Donna	Kilgore	New Braunfels	Texas City
Houston	Abilene	10,000 TO 20,000	Harlingen	San Benito	Brady	Eagle Pass	Lamesa	Odessa	Uvalde
San Antonio	Brownsville	Big Spring	Highland Park	Sweetwater	Breckenridge	Edinburg	Levelland	Pecos	Waxahachie
	Brownwood	Borger	Kingsville	Temple	Brenham	Electra	Lockhart	Plainview	Weatherford
50,000 TO 100,000	Lubbock	Bryan	Longview	Terrell	Cameron	Ennis	Marfa	Port Neches	Westlaco
Amarillo	Lubbock	Cleburne	Lufkin	University Park	Castellberry	Freepport	Marlin	Robstown	West University
Beaumont	Marshall	Corsicana	McAllen	Vernon	Childress	Graham	Mercedes	Rusk	Place



An open letter from Texas

When eastern folks come down to visit Texas their eyes bug out like a horned toad's. Why?

'Tisn't cattle nor ten-gallon hats. They expect them.

'Tisn't our football teams—they've seen their eastern teams larruped by 'em too often.

'Tisn't those wide-open spaces—their grade school geographies taught 'em that Texas is tremendous.

'Tisn't oil wells and cotton fields—they've heard about them too.

Well, what is it that causes tremors of surprise to run through those visiting easterners?

They don't look for skyscrapers, and they find them in clusters in a dozen Texas cities.

They don't expect Texas seaports, and they learn that in ocean commerce four of our Texas ports are among the first dozen in America.

They have never counted Texas as an industrial state, and they see steel mills, refineries, synthetic rubber plants, chemical, paper and

food processing plants and all kinds of other industrial units.

They don't anticipate "seats of higher learning" and they can count more than two-score of the most modern colleges and universities, to say nothing of our art museums, libraries and other cultural institutions.

And their eyes tell 'em pretty fast why our city girls are setting a lot of fashion styles these days.

Everybody should visit us and see modern Texas for himself. So, in order to spread the light, we're printing this Texas message.

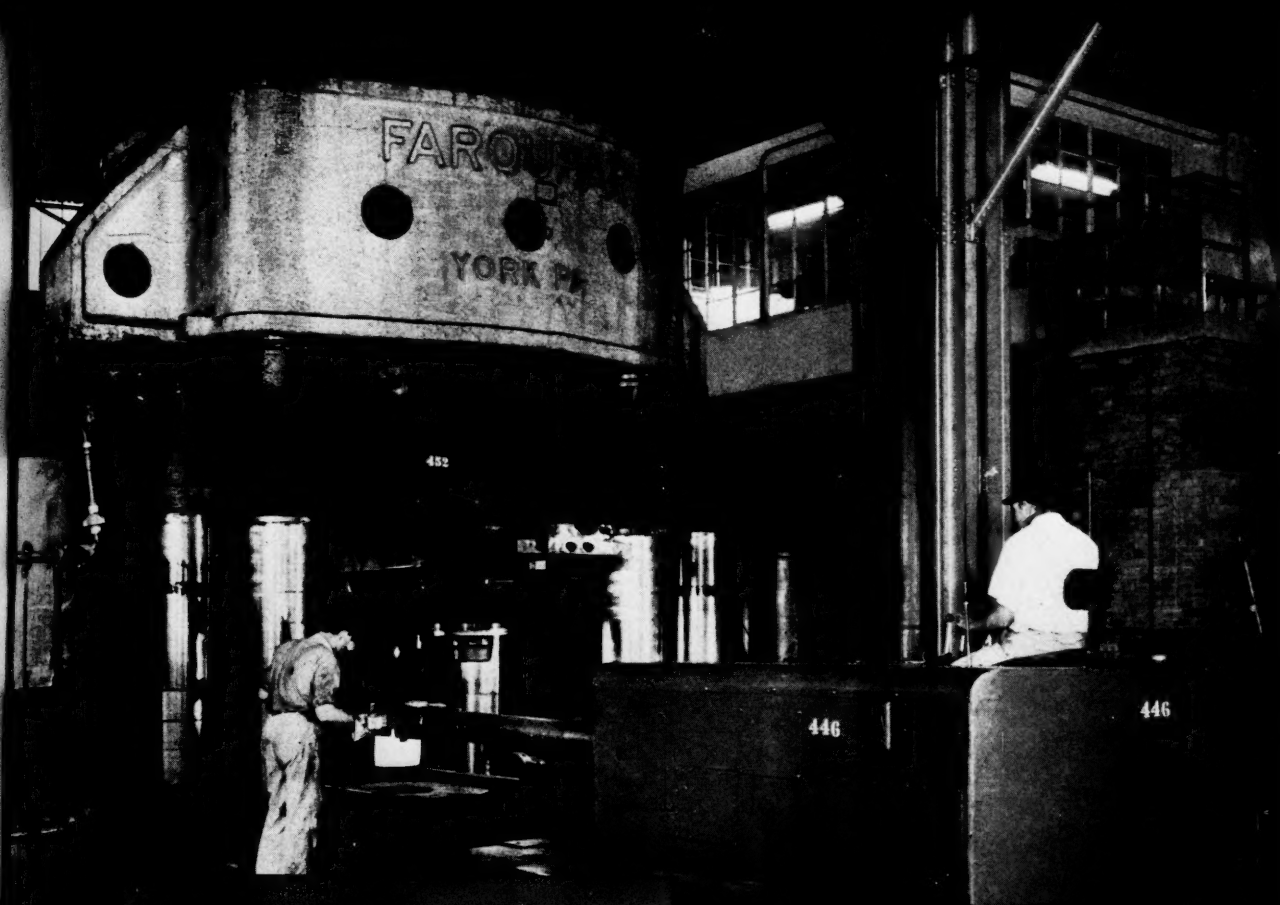
★ ★ ★ ★

Santa Fe, a Texas partner and booster since 1880, and serving Texas with 3,693 miles of rail, with automatic block signal protection all the way from Galveston to Chicago, presents the above Texas Tribute as a mark of our appreciation for the great job Texas is doing in almost every phase of industrial activity.

SANTA FE SYSTEM LINES

Serving Texas and the Southwest





**CAMERON IRON WORKS'
NEW 5,000-TON FORGING
PRESS is helping shape
a greater industrial South**

Cameron's post-war plans for a new and greater manufacturing plant for petroleum industry equipment are nearing completion. On a 60-acre tract near Houston some units of the new Cameron works are already in operation, including one of the newest and most complete forge shops in the nation. Pictures on this page show the huge closed-die press in operation, forming oil well casing heads from alloy steel. Drop hammers of 2000 and 6000 lbs. capacity and billet heating and heat treating furnaces round out the shop equipment.

At the close of the war Cameron was listed among the nation's eight outstanding producers of naval ordnance . . . the only plant south and west of the Mississippi to be so honored . . . and was recognized throughout the oil world as the leading manufacturer of oil well drilling and producing control equipment. The new Cameron is dedicated to steadfastly holding that recognition for Texas and the great Southwest.

CAMERON IRON WORKS, INC.
711 Milby Street Houston, Texas

DALLAS . . . first fashion city of the South and Southwest



FIRST in Apparel Manufacturing . . . fifth largest market in the Nation, with annual sales in excess of \$40,000,000. FIRST in Millinery Manufacturing . . . third largest in the Nation. FIRST in Fashion Distribution . . . hundreds of Nationally known brands maintain permanent headquarters in Dallas. FIRST in Advertising . . . with an annual advertising budget in excess of \$300,000. FIRST as a Market City . . . Attracting thousands of buyers from every key point in the Country. FIRST in the Number and Diversity of its Fashion Creations . . . with special emphasis on fine Sportswear.

FOUR GREAT MARKET WEEKS DURING JANUARY • MAY • JULY • OCTOBER

DALLAS FASHION & SPORTSWEAR CENTER

Your Business Expansion Plans Should Include Dallas

n April 11, 1842—Established in D

46 — TWENTY-FOUR PA

Dallas First In U.S. Rate Of Growth

**Million Populace Seen
For City in 1956
By U.S. Chamber**

BY HAYWOOD VINCENT,
Special Correspondent of The News.

NEW YORK, Feb. 11.—Dallas is the fastest growing city in the United States with a predicted population of one million by 1956, the United States Chamber of Commerce said Monday.

Robert W. Davidson, associate director of the chamber, said figures compiled by his national organization revealed the Greater Dallas area now has more than 500,000 inhabitants.

That figure, he said, included the separate municipalities of the Greater Dallas area and those residents whose income is derived from the metropolitan section.

Some 1,700 new businesses are seeking admittance to the Dallas area as quickly as housing and business space permits, Davidson's figures revealed. He added that the Trinity River development proposed program has attracted considerable attention in Eastern business circles.

In some New York quarters there has even been some talk of private capital financing such a project, reports here said.

Davidson's report said among
me industrial exlor

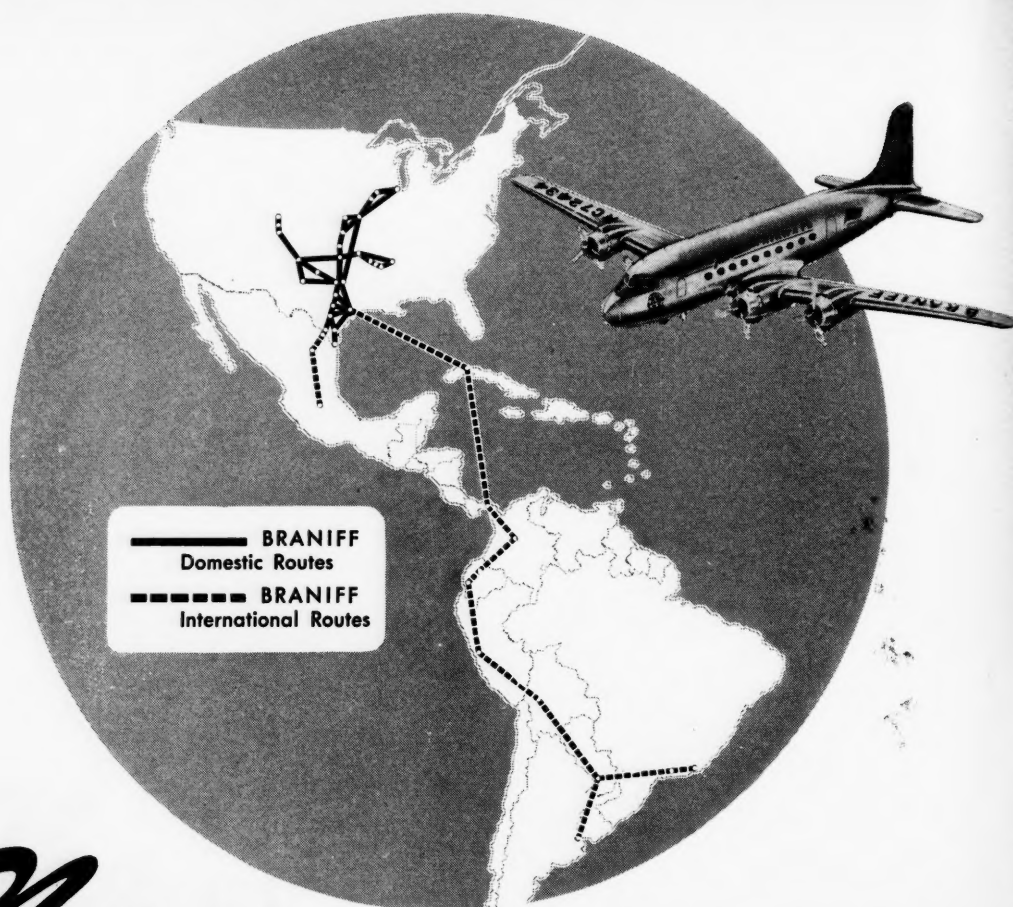
**GROWING
THE U.S.**

**FASTEST
CITY IN**

Reprinted from Dallas Morning News

*This alert and active organization of nearly 200 members invites
you to share in the opportunities offered by the fastest growing
Manufacturing, Wholesaling and Distributing City in America.*

DALLAS MANUFACTURER'S & WHOLESALE'S ASSOCIATION



Now BRANIFF AIR-LINKS THE U.S. AND LATIN AMERICA

TEXAS Becomes Great International Aerial Gateway

The Civil Aeronautics Board, with President Truman's approval, has issued to Braniff Airways a certificate of convenience and necessity, authorizing it to connect by air the United States and Latin America, via Houston, San Antonio and Laredo, Texas. The international assignment is accepted with Braniff's pledge to provide the same high quality service as has characterized its domestic operation. This air-link is of tremendous significance in building goodwill and solidarity, in developing trade and new markets, in maintaining national incomes and employment throughout the Americas.



Braniff Airways International Routes

1. An extension of Braniff present routes via Houston, Texas, to Havana, Cuba; Balboa, Panama Canal Zone; Bogota, Colombia; Quito and Guayaquil, Ecuador; Lima, Peru; LaPaz, Bolivia; Asuncion, Paraguay; Sao Paulo and Rio de Janeiro, Brazil, and Buenos Aires, Argentina.
2. An extension of Braniff present routes via San Antonio and Laredo, Texas to Monterrey and Mexico City, Mexico.

ABOVE ALL! *Strength and Flexibility*

Experience teaches that these Rope Wire
qualities are ALWAYS "Firsts"

ONE of the toughest of all jobs that wire rope has is on the overhead crane that handles molten steel. Here the wire rope lifts a 170,000 lb. ladle, filled with 300,000 lbs. of steel. It must be spotted accurately for teeming into mold after mold. A break would mean loss of thousands of dollars in steel and mill equipment.

In short, the rope has to be good! It has to be strong and flexible--strong, to lift and carry its many-ton burden, day in, day out--flexible, to flow smoothly and efficiently over crane sheaves.

Strength and flexibility depend on the wire from which the rope is woven. These qualities, built into every foot of Yolectro High Carbon Rope Wire, are always "firsts," as are uniformity of gauge, toughness to resist abrasion, and ability to resist corrosion. Like all its wire mill products, the wire supplied by Youngstown to wire rope manufacturers is of finest quality steel, refined, rolled and drawn to exact specifications.

No user of wire rope has a better opportunity to test and prove the qualities of the product than the steel maker. Here, in the Youngstown open hearth department, steel for rope wire is being teemed from ladle into ingot molds.



YOUNGSTOWN

ENNIS, TEXAS

HEART OF A 10 BILLION DOLLAR MARKET

The Year Round

PAY GROUND

of the Great Southwest

Things are happening in Texas and the great Southwest . . . and Ennis is right in the big middle of it. Year 'round good climate . . . fine schools . . . beautiful churches . . . ideal recreation facilities . . . the best transportation facilities . . . a world of natural resources . . . and what is most important . . .

AN ABUNDANCE OF AVAILABLE LABOR

There are no labor shortages or labor problems in Ennis, Texas. Thousands of skilled and semi-skilled native workers are available. Many thousands more of unskilled men and women, easily trained and quickly adaptable to many types of work, offer a great reservoir of labor who have the Texas way of getting the job done.

City population 10,000. 46,000 in 15-mile radius.

Get all of the facts and you'll consider Ennis in your expansion plans. A letter will bring them by return mail.

FREE PLANT SITES: 200 conveniently located acres of land are offered free of charge to industries coming to Ennis. All utilities and all-weather roads are available at site, without cost or obligation. Railroad spur tracks are available if required.

FINE TRANSPORTATION: Overnight delivery to all Southwestern cities. Terminal and division headquarters Dallas-Austin divisions of Southern Pacific. Twenty-four hour switching service. New low truck and rail rates reduce distribution costs.

NATURAL RESOURCES: Adjacent to natural gas, lumber, steel, rubber, chemicals, agricultural products. An abundance of these close-at-hand raw materials makes possible a great saving in cost of inbound freight. Advantageous for many types of industry.

MILD CLIMATE: Year 'round ideal weather conditions (summer average 84 degrees; winter average 50 degrees) permit low cost plant and home construction; enable worthwhile fuel saving. Climate is conducive to good health, good living.

STRATEGIC LOCATION: With emphasis being put on Pan-American trade, and barriers being rapidly lifted, Ennis is right next door to this huge market, and offers unlimited advantages to industries contemplating entry into this fertile field.

All Negotiations Confidential

INDUSTRIAL COMMITTEE

ENNIS CHAMBER OF COMMERCE
ENNIS, TEXAS

"NO INFLATION COMING"

The new and revised edition of *No Inflation Coming*, by William J. Baxter, published by the International Economic Research Bureau, is to all intents and purposes a new book, as the extensive revisions bring it completely up to date.

Mr. Baxter is an economist who got there the hard way—by practicing what he preaches. A graduate of the Harvard Business School, he was active for several years in the executive side of business, founding a number of companies, and for the past few years has been head of an extensive economic service designed to aid management.

The sound theories propounded in the book have fallen into disrepute in the past decade, being scoffed at by New Deal theorists as old-fashioned. They are, primarily, the unassailable tenets of laissez-faire and the law of supply and demand.

Written in light style, this book, as its title would indicate, holds that there will be no great inflation in the United States. This is claimed for a variety of reasons, one of the most homely of which is that never in history has a period of inflation occurred when the people themselves were alarmed about it. There are some who would term this rank superstition, but it is incontrovertible that the man who is cautious about slipping on the ice is far less likely to do so than the careless man.

Another argument advanced for the soundness of our monetary situation is the conservative banking policy now in vogue. Banks, in contrast to most other business enterprises, today have a large proportion of their assets in a highly liquid state. Thus, any period of stress would find them in better shape than other businesses, and since the banks are in a position to exercise considerable control over the value of money, such a period of stress would be unlikely to manifest itself in currency fluctuations.

Mr. Baxter's advice to those who would escape the postwar period unscathed is to keep plenty of money in the bank. He believes that it is impossible, with America's tremendous productive capacity, for inflation to hit this country as it did Europe after the last war, since Europe's trouble was largely a lack of goods. Thus while prices will undoubtedly be bid up at first when controls are relaxed, full production will bring them down, and the business or individual who waits to buy what he wants until the price is right is the one who will be best off.

A Congressman from Michigan recently placed a statement in the Congressional Record to the effect that there are more communist organizations in the Detroit area than there are Rotary, Exchange, Kiwanis and Lions Clubs. It is also frequently reported that in the city of Chicago there are between forty and fifty communist labor schools where young men and women learn parliamentary procedure, public speaking, labor journalism, infiltration, disorganization, and they are turning out highly trained specialists in their fields.

IN
SAN ANTONIO

Outstanding in Serving
Business of National Scope.

Connections Throughout
the Great Southwest Texas
Empire.

Correspondence Invited.

TOTAL
CAPITAL STRUCTURE
OVER
FOUR MILLIONS



National
BANK OF COMMERCE
of San Antonio

Established in 1903

Industry's GREAT NEW Frontier

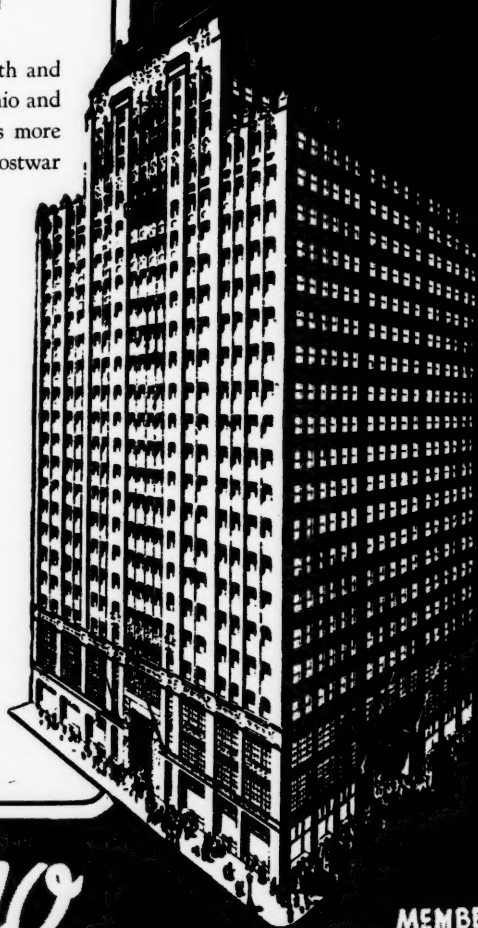
THE NEW SOUTHWEST BECKONS, BRIMMING WITH OPPORTUNITY

At no time in history have the prospects for growth and development been brighter than now for San Antonio and the great Southwest. No section of the country is more likely to hold and expand its wartime gains in the postwar era we are now entering. Today, a new Southwest beckons American manufacturers, brimming with big opportunities that cannot be overlooked.

More than 50 years of intimate association with the industrial progress of this area place us in a favorable position to advise you as to its possibilities. We know San Antonio, South Texas, and Mexico. If there is any information you want regarding plant establishment, proximity to raw materials, transportation, and marketing in and from this area, we will be more than happy to provide it.

Based on our half-century of service to manufacturers already in the Southwest, you will find us alert, able, and willing to assist you whenever and however we can. Do not hesitate to call on us.

★
FOR OVER
50 years
ONE OF THE
SOUTHWEST'S
LEADING
BANKING
INSTITUTIONS
★



A GREATER
Alamo
NATIONAL BANK
OF SAN ANTONIO

★ *Alert* ★ *Able* ★ *Willing*

MEMBER
FEDERAL
DEPOSIT
INSURANCE
CORPORATION



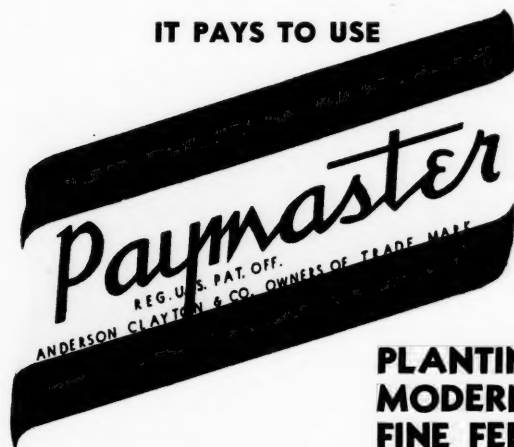
☆ *Greyhound serves Texas* over 3000 miles of highway routes. This thrifty, convenient form of travel is a favorite in Texas, too, and will play an important part in its industrial and cultural growth in the future as it has for the past seventeen years.

GREYHOUND LINES

MECHANIZATION OF COTTON IS INEVITABLE

WEST TEXAS LAND IS IDEAL FOR MECHANIZED FARMING

IT PAYS TO USE



**PLANTING SEEDS
MODERN GINS
FINE FEED**

WEST TEXAS COTTONOIL CO., Division of Western Cottonoil Co.

MILLS AT

ABILENE
MUNDAY

BALLINGER
PLAINVIEW

BROWNFIELD
SAN ANGELO

LITTLEFIELD
SEYMOUR

MEMPHIS
SLATON



TEXAS *and* COTTON

Cotton plus cottonseed is the most valuable crop in Texas and is produced in all but 30 of the State's 254 counties. While cotton acreage in Texas, and elsewhere, has been on the decline, the cotton yield per acre is on the upgrade. Also encouraging is the fact that the level areas of West Texas particularly lend themselves to mechanization of cultivation and harvesting so that cotton can be produced for less cost than ever before.

Cotton is called a "cash" crop and since all of the lint and most of the seed is sold, it generates a tremendous commerce. When the cotton's rollin' in, Texas is on the move.

ANDERSON CLAYTON & CO.

(INCORPORATED)

COTTON AND COTTONSEED PRODUCTS

Out of SHELL RESEARCH

come finer products . . .

● FOR TRANSPORTATION

Shell conducts a never-ending search for finer fuels and lubricants . . . for better methods of production, refining and distribution. Much of the performance we take for granted in automobiles, in ships, in airplanes and in trains comes from the steady advance of petroleum science . . . and Shell has long been in the forefront of that research.

● FOR THE FARM

Shell scientists have developed insecticides to control the scourge of microscopic worms called nematodes . . . have created important new sources of agricultural ammonia from refinery waste . . . have produced effective rust preventives to help stop the huge loss suffered each year by farm equipment.

● FOR INDUSTRY

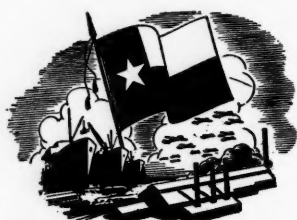
there are specialized fuels and lubricants for a tremendous variety of machines . . . oils for hydraulic control systems . . . lubricants for metal-working operations of many kinds . . . rust preventives to preserve plant equipment and to protect raw stock and finished products.

● FOR THE HOME

Shell - developed ingredients are part of many everyday articles, such as drugs, disinfectants, paints and fabrics. Work-saving cleaners and polishes, fuels for oil burners and bottled gas for homes beyond the gas mains are produced and marketed by Shell.



SHELL OIL COMPANY, INCORPORATED



Her strength lies not in size alone

Texas has a lot of land.

She has fertile acres enough to produce the largest crop of cotton of any state in the union . . . plenty of land to pour forth nearly half of the nation's petroleum. Her cattle ranches are measured in square miles.

But the strength of Texas . . . the strength that has meant so much to America . . . is not merely a matter of land area.

Texas is also an industrial empire.

Long before Pearl Harbor, men with a vision as wide as the Texas horizon saw the Lone Star State as a land of mills and factories. And Texas began to make things as well as take them from the earth . . . lumber and paper and furniture, ceramics, textiles, and building materials.

She had already hit her stride when the enemy struck.

And then, Texas produced an industrial miracle.

America needed ships . . . ships of all kinds, and in a hurry. Along the Texas Gulf Coast, bayou-like rivers floated down to the sea a mul-

titude of ships, ranging from landing craft to the largest cargo vessels.

America needed planes. And the bombers that blackened the sky above Berlin and brought the Nazis to their knees rolled off production lines in Texas.

Fighting men roll on to victory on rubber tires . . . so we needed rubber. The Port Neches butadiene plant . . . the world's largest and a triumph of industrial co-operation . . . was built in record time to furnish an ample supply of this essential ingredient of synthetic rubber.

Here at Gulf we have a deep appreciation of the great contribution that Texas industries have made to the nation in peace and war. As a leading maker of petroleum products used in industry . . . fuels, lubricants, cutting and quenching oils . . . it has been our good fortune to grow up with Texas industry.

As one of the partners, we are proud to salute Texas industry and its workers . . . from Texarkana to El Paso and from the Panhandle to Brownsville . . . for their great accomplishments.



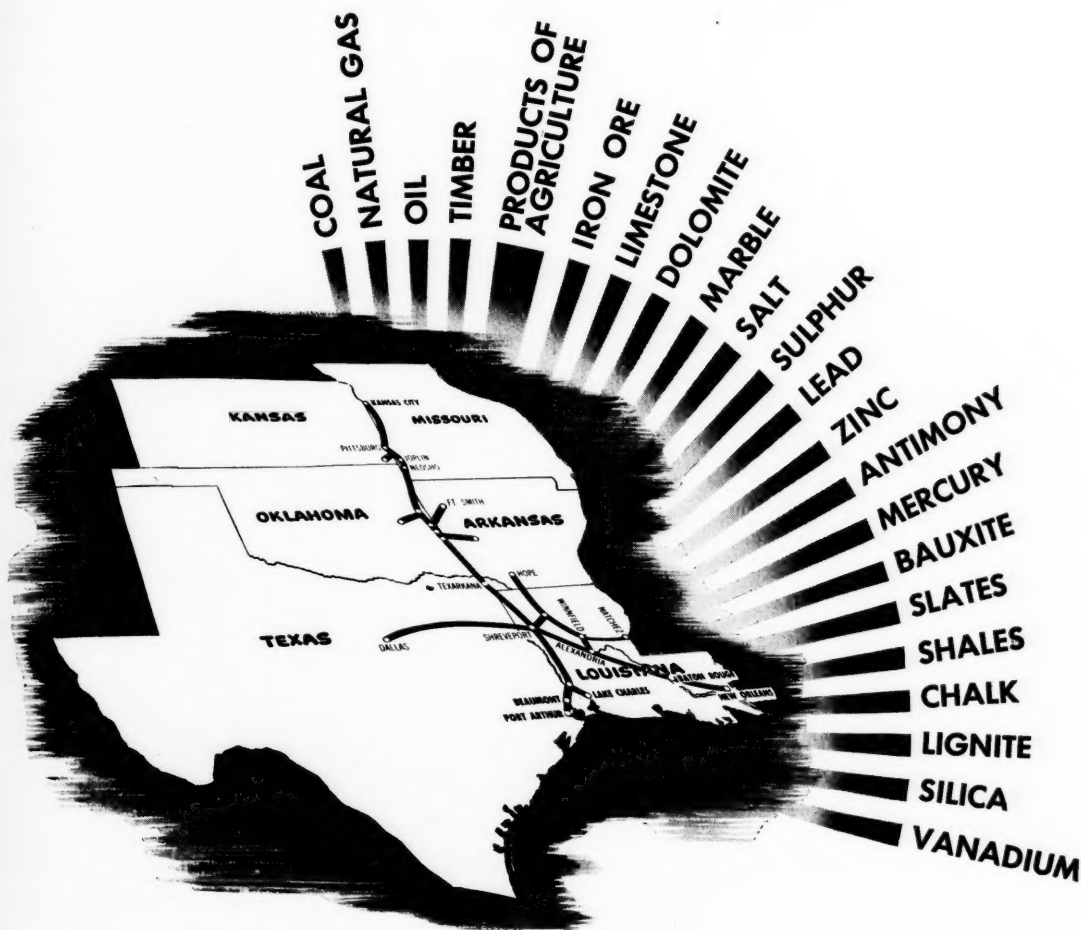
PARTNERS WITH INDUSTRY

The Gulf Service Engineer is a familiar visitor in industrial plants, workshops, and mines . . . from Maine to Texas.

Each engineer is a trained specialist at putting the more than 400 superior Gulf industrial oils, greases, fuels, and other petroleum products to work . . . helping machines to run better and last longer, helping to speed production and lower costs.

Now that the gigantic war job is done, their skill and their products will be invaluable to industry in achieving maximum efficiency in peacetime production.

INDUSTRY'S... *land of promise*



Compressed in this one section of our country is a vast store of natural wealth—*all the needs of varied manufacture!*

Here are the basic requirements of the chemical and steel industries... the minerals for light metals... the mineral, agricultural and forest sources of plastics. Here is a plentiful supply of water, free of impurities... intelligent, loyal, American-born industrial and agricultural labor... fast, convenient transportation to domestic and foreign markets.

In short, here is a frontier that calls urgently to those who would make the most of the expanding horizons of tomorrow.



Address Development Department,
KANSAS CITY SOUTHERN LINES,
Kansas City Southern Bldg.,
Kansas City 6, Mo.,
for Information and Cooperation.

PETROLEUM

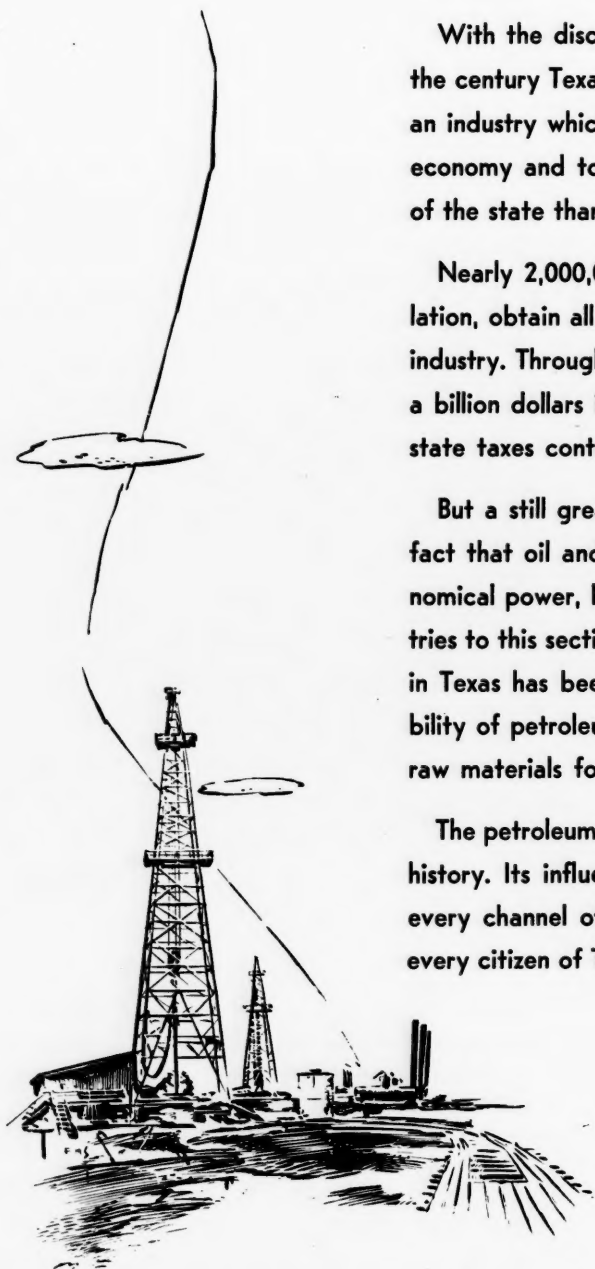
Writes a New Chapter in Texas History

With the discovery of oil at Spindletop around the turn of the century Texas history entered a new phase. There was born an industry which was to change the whole structure of Texas economy and to contribute more to the wealth and progress of the state than any other single resource.

Nearly 2,000,000 people, over a tenth of the state's population, obtain all or part of their livelihood from the petroleum industry. Through salaries, wages, leases and royalties over half a billion dollars is returned to Texans annually, while local and state taxes contribute another \$100,000,000.

But a still greater contribution to Texas progress lies in the fact that oil and gas, by providing a plentiful source of economical power, have acted as lodestones to attract new industries to this section. The recent widespread industrial expansion in Texas has been established in large measure on the availability of petroleum both as a fuel and as a versatile source of raw materials for the manufacture of finished products.

The petroleum industry has written a brilliant chapter in Texas history. Its influence reaches into every section of the state, every channel of trade, and every economic level to benefit every citizen of Texas.

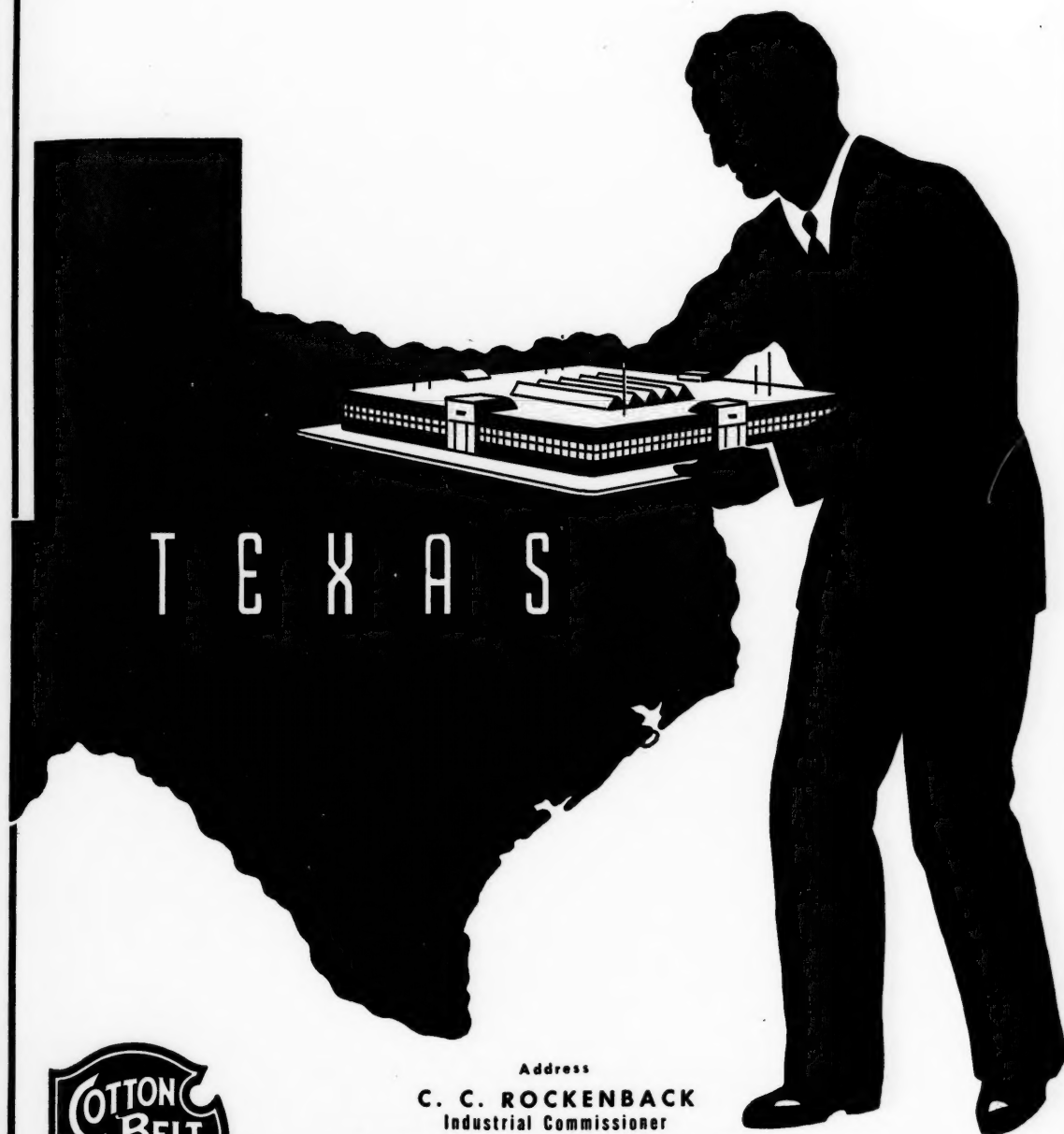


HUMBLE

HUMBLE OIL & REFINING COMPANY

Manufacturers of fine petroleum products for automotive, aviation and industrial use and leading producer of crude oils in the United States.

PUT YOUR PLANT IN THIS IDEAL AREA



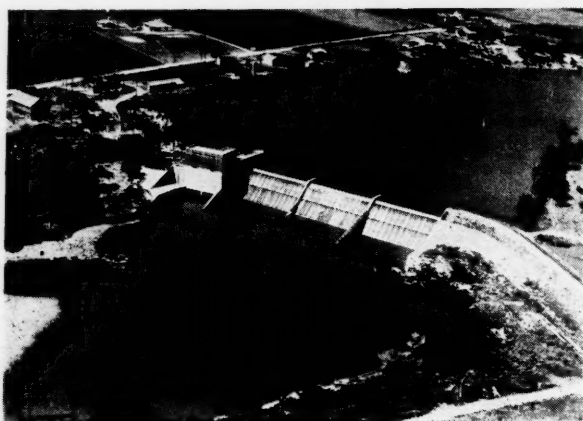
Address

C. C. ROCKENBACK
Industrial Commissioner

ST. LOUIS SOUTHWESTERN RAILWAY LINES
ST. LOUIS 2, MISSOURI

For Information and Complete Analyses

SERVING TEXAS AND THE GREAT SOUTHWEST



Lake McQueeney, with Hydro-Electric Power Dam, on Guadalupe River, is one of 6 dams within radius of 8 miles of Seguin.

Manufacturers, **FOR YOUR POSTWAR EXPANSION COME TO THE SOUTHWEST**

**Here Labor and Capital Still
Work Together**

REALLY, a move to the Southwest can be the solution to your production problems.

Your plant will be welcome in Seguin, Texas, and will prosper here. Be a pioneer and follow the production trend to the Southwest.

The warm climate permits year 'round maximum operation.

Seguin Offers Industry:

1. Friendly, Cooperative Labor
2. Labor Unions Non-Existent
3. Abundance of Raw Materials
4. Abundance of Hydro-Electric Power
5. Abundant Pure Water Supply
6. Abundance of Natural Gas
7. Excellent Transportation
8. Vast Markets (Gateway to Latin America)
9. Excellent Plant Sites
10. Low Taxes (City Tax—80c)
11. No State Income or Sales Tax
12. Average Temperature—69°

Seguin is one of the most progressive small towns in Texas (9,000 population) located 30 miles east of San Antonio on the main line of the Southern Pacific Railroad.

Seguin is the ideal city for both work and play. It possesses all of the requisites conducive to a well-rounded, healthful, happy life.

Seguin is proud of its slogan—"Some Bigger—None Better."

For additional information write or wire:

SEGUIN CHAMBER OF COMMERCE

C. R. Deschner, Manager
Seguin, Texas

South Favored as Site of Cocoa, Chocolate Plant

Somewhere in the Southern region should be located a plant for the manufacture of cocoa and chocolate. That all of our chocolate and cocoa is now manufactured in the northeastern part of the country is largely due to custom and tradition, because except for these factors, the South is the logical place for its production. The South is much nearer the source of supply for the raw material; the South furnishes a ready market for the manufactured product, and many of the allied commodities used in connection with chocolate, such as sugar, milk, fruits, nuts, and berries are natural products of the South.

The cacao tree, which produces the cacao beans from which chocolate is made, thrives only in tropical climate and does best near the equator. Introduced into Europe by the Spanish explorer, Cortez, when he returned from Mexico some four hundred years ago, chocolate is now a food and a flavor with world-wide favor.

Of all the ingredients used in the manufacture of candy, chocolate is the most valuable, some seventy millions of dollars worth being used annually by candy manufacturers in the Southern region alone. Chocolate can be used in so many ways as a flavor, beverage, and food that its possibilities are almost unlimited.

The South will be overlooking a natural industrial development until the manufacture of chocolate and cocoa is located within its borders. With a third of the nation's people living in the South, the market is readymade. With Southern ports being located much nearer the source of supply, time and expense would be saved in the importation of the cacao beans. With its manufacture in the South, time and expense would also be saved in distribution of the finished product to the points of consumption.

Moreover, other important industrial and agricultural projects closely allied with the use of chocolate, such as sugar refineries, corrugated box factories, growing and processing of nuts, dairying and production of milk, are already native to the South and can be expanded to whatever extent is required.

Now that the South, after all these years, has once again accumulated the necessary capital with which to finance its own industries; now that the South has skilled, efficient labor and well-trained management, it would be well in order for the region to include in its fast-growing industrial development any industry which meets such natural needs and which has such great possibilities as the manufacture of chocolate.—*Thurman Sensing.*

Unless that liberty, which is of such a kind as arms can neither procure nor take away, which alone is the fruit of piety, of justice, of temperance, and unadulterated virtue, shall have taken deep root in your minds and hearts, there will not long be wanting one who will snatch from you by treachery what you have acquired by arms.—*Milton.*

WEST TEXAS

Raw Materials Capital of the World

INVITES INDUSTRY

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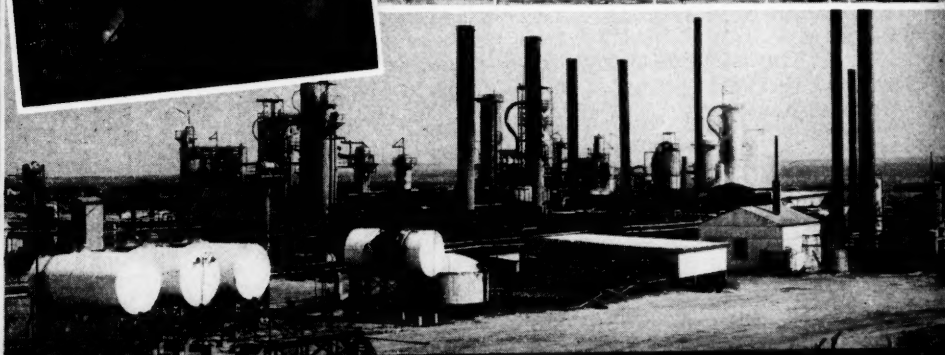
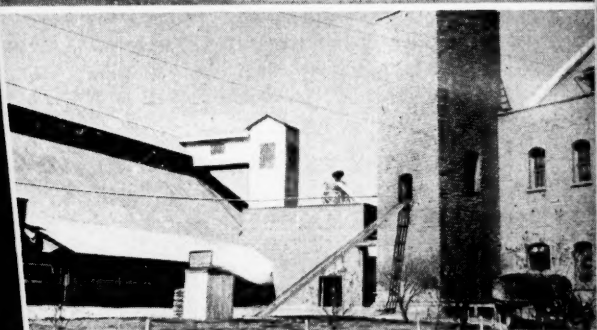
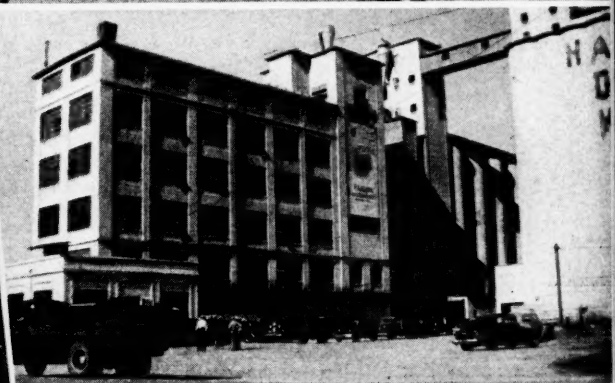
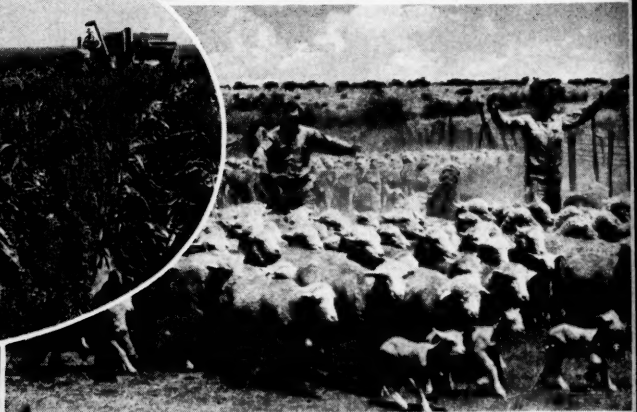
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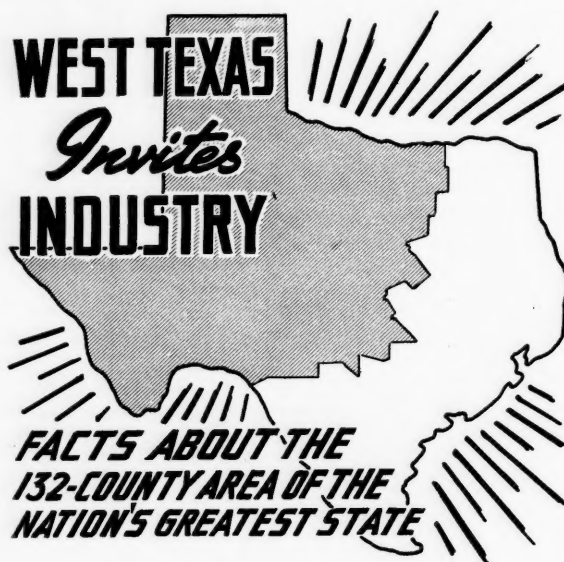


West Texas . . . A Message and Invitation to Industry

THE story of West Texas was written for and is addressed by the West Texas Chamber of Commerce to American business. It contains essential facts for industrialists who are manufacturing, or starting or planning to manufacture, goods needed in this entering era of reconstruction to a civilian economy.

It is recognized that industry is facing serious problems as it sets about re-erecting and expanding our business structure for the post war. Among these are a sufficient and dependable labor supply; nearness of needed raw materials in abundance; adequate resources and facilities of water, power, fuel and transportation; an equable climate; and reasonable taxation attitudes by state and local governments. The West Texas Chamber of Commerce confidently asserts that to all of these, and other problems that may occur, our region is THE answer: a NATURAL for those aware of the need for decentralization into new areas where conditions and environment tend to smooth out difficulties felt at present locations.

We invite inquiries, and, through the local Chambers of Commerce affiliated with our West Texas Industrial Development Bureau, we offer alert servicing, investigations and reports on specific points or locations industrial executives may be interested in. Such matters referred to our attention will be, if it is desired, treated confidentially.



**Long and Truly Known
as the
Raw Materials Capital of the World**

Location, Population, Area, Towns

THE West Texas region embraces the 132 counties of the nation's largest state lying west and northwest of a line drawn from Red River southward through Gainesville, Denton, Fort Worth, Cleburne, Waco and Lampasas to the Rio Grande forming our border with Mexico.

The entire area of 162,500 square miles occupies nearly two-thirds of all Texas. Within it live an estimated 2,272,000 persons. While the 1940 U. S. Census accounted for 1,922,298, War Ration Book counts in the six principal cities taken in the period just prior to V-E Day indicated an all-region population increase of around 350,000. While

West Texas still has abundant "elbow room" in its vast reaches, the rate of population growth has increased at an unusual rate: at 7% per year average since 1900 against 3.3% for all Texas and 2.1% for the United States.

On racial lines our citizenship is 92% American born white. West Texans believe firmly in private initiative and free enterprise. Group labor disturbances are virtually nonexistent. The percentage of literacy here is high. For the young generation, records of the State Department of Education reveal that 76% of all West Texans scholastically enumerated attend public school regularly, against 62% elsewhere in Texas. In higher education, West Texas has 30 institutions of university and college rank with total enrollment of 42,000. Their building and expansion programs currently under way foot up to \$32,750,000 with \$14 million additional to be placed in permanent endowment funds.

West Texas towns generally are small. They were built and rest on the nation's most diversified agricultural, livestock and oil economy. They are among the most up-to-date and progressive of American communities. Eagerly seeking postwar industrial development they are ready to support the beginnings of such with their own funds and faith. Assessed values and tax rates are moderate to very low, public debt being paid mainly from population growth. Texas has no state income tax.

Production From the Land

WEST Texas contains 104 million acres of land of which 20 million acres are in cultivation, 44 million are classified as range land and 40 million are tillable acres yet to feel the plow's blade. The resources and productive development of this immense area are portrayed in the West Texas Resource Museum Institute affiliated with and housed in the headquarters building of the West Texas Chamber of Commerce. Production of major agricultural commodities from the region's storehouse of raw materials is revealed there as follows:

COTTON: 1,250,000 bales per year (last 10-year aver-

WEST TEXAS CLIMATE IS IDEAL FOR YEAR AROUND FACTORY WORKING CONDITIONS

WEST TEXAS TAXING POLICIES ARE MODERATE TO LOW—NO STATE INCOME TAX

age), being thus equivalent to 10% of the national production.

WHEAT: 56,000,000 bushels (1944 harvest) and 43,200,000 bushels (10-year average). Of higher quality wheat rich in protein content, our Panhandle markets 51% of the national production.

GRAIN SORGHUMS: 87,050,000 bushels (1944) and 67,000,000 bushels (10-year average), being 86% of the state's and 44% of the nation's total production of these high protein grain feeds.

Unlisted here for lack of space are lesser agricultural commodities whose production figures are on display in the Resource Museum Institute. They include other small grains, dairy and poultry products, peanuts and pecans, watermelons and cantaloupes, and all of the non-citrus fruits grown in the United States. They, with the major crops of cotton, wheat and grain sorghums, round out a prosperous picture of diversified cropping in West Texas.

Ranking with agriculture in this region's economy of the soil is livestock breeding and feeding. From our illimitable herds on 44 million acres of range land, and from the feedlots on 3,300 ranches, come 65% of the cattle of this the greatest producing state: 4,940,000 head in 1944. In that year, too, West Texas stockmen had 8,072,000 sheep and lambs, or 15% of the national total, and 3,040,000 goats, that figure equalling 86% of the state's and 70% of U. S. production.

Minerals: Production & Resources

NOW we turn to an industry without which the war could not have been won, or even waged.

West Texas oilfields are among the most prolific and promising in Texas, the No. 1 producing state. Of the Texas total of 48½ million acres under lease at the beginning of 1945 for oil and gas exploration, 28 million were West Texas acres. The area's 1945 production of crude oil was 260,543,973 barrels. At present stepped-up allowances, this year's total production probably will exceed the 300 million barrel mark. Over the past 30 years West Texas production of crude oil has equalled 20% of the nation's. Its proven oil reserves, as yet untapped, are estimated by major company geologists at 5½ billion barrels or 27% of the national reserve. Serving the producers are 9,200 miles of main trunk pipe lines and 5,400 miles of gathering systems.

Of natural and casinghead gas, the area's production is currently running at the rate of 1,750,000,000,000 (trillion) cubic feet annually, being enough to meet the fuel requirements of the nation. The largest natural gas field in the United States is in the Panhandle of West Texas.

Of carbon black, so increasingly valuable to industry, West Texas production currently is at the rate of 600,000,000 pounds per year and dominates the state and national picture, being 90% of the one, 75% of the other.

Next: helium. Taken aloft by this non-inflammable vapor, the blimps and dirigible cruisers performed their war missions with safety to crews and cargoes. Of three helium plants in the United States, two are in our Panhandle, and their 1944 production (last available figure) was 2,165,333 cubic feet—99% plus of the nation's.

In the sum of West Texas resources are other minerals

and earth products termed "minor" only in the sense that development here has been but a small fraction of known reserves. The deposits of sand, gravel and clay are beyond reasonable calculation. The region is the state's only source of mercury and silver. It has large resources of sulphur, marble, granite, coal, and 3,700 square miles of proven gypsum deposits. Its deposits of potash are among the world's most extensive with 57 million tons estimated as in reserve and awaiting development.

The field of West Texas mineral development actually has been hardly scratched. The Resource Museum Institute has a listing secured from the U. S. Bureau of Mines of 57 minerals that have been found to exist in the area in quantity justifying intensive exploration and in some cases commercial development. The products are agate, asbestos, asphalt . . . barite, bismuth, burning and filtering clay . . . caliche, calcite, celestite, chalcidony, chromite, copper . . . diatomite, dolomite, drilling clay . . . feldspar, flagstone, fossil wood, fluorspar . . . graphite, guano, gypsite . . . ichthyol, iron ore . . . kaolin . . . lead, lignite, limestone . . . magnesium chloride, magnesium sulphate, magnesite, manganese, mica . . . nickel, nitrates, novoculite . . . oil shale, opal chalcidony . . . porophry . . . rhyalite . . . salt, silica, slate, soapstone, sodium sulphate, syenite . . . terrazzo, tin, titanium, tuff, tungsten, turquoise . . . vermiculite, volcanic ash . . . and zinc.

Water, Power & Fuel Services

PROCESSING of West Texas' vast stores of raw materials presents no problems of standby water, electric power and fuel services. The area derives tremendous industrial water supplies both from surface reservoirs fed by nine rivers and tributaries and from exhaustless underground stores where the water bearing sands and gravels are picked up at from 30 feet. More than 700,000 West Texas acres are irrigated from pumping shallow wells. Of 84 stream-fed surface reservoirs in Texas of 1,000 acre feet and up, 52 are in West Texas totalling 4,309,297 acre feet.

On electric power and gas fuel, the area is crossed and crisscrossed by highlines, powerplants and stepdown stations, while gas pipe lines convey that most efficient fuel to all towns regardless of size. The 78 electric powerplants in West Texas had installed generating capacity as of January 1, 1945 of 626,350 kilowatts and 801,800 horsepower. Within the area are more than 5,000 miles of high voltage transmission lines of 60,000 volts, and over 12,000 miles of lines carrying 11,000 to 60,000 volts. The high voltage lines are interconnected to form a power grid serving every community.

The area is served by eight electric and 23 gas utilities, of which four are starting improvement and expansion programs involving expenditure of more than \$25,000,000. Throughout West Texas water and power rates are as low as industry enjoys elsewhere, and gas fuel rates are the nation's lowest.

Transportation Services

SIMILARLY, no major transportation problems exist on moving West Texas raw materials to factory sites and finished goods to markets. Rail and highway networks cover

WEST TEXAS ELECTRIC AND GAS RATES ARE LOW, SERVICES ADEQUATE, DEPENDABLE

the area from end to end. Rail traffic is borne on 9,451 miles of first line main track and 12,972 miles total, exceeding the total of any state of the U. S. except all-Texas. Service is provided by seven Class I railroads and many branch lines.

The West Texas highway network totals 11,440 miles of paved roads state and/or federally designated and maintained; 3,168 miles of paved farm-to-market and secondary roads; and 84,894 miles of graveled and graded feeder roads. Twenty-four mainline U. S. highways traverse the area. The national postwar highway act of December 12, 1944 will provide \$60,550,000 for federally and state financed road construction over a three-year period in the West Texas area. On West Texas highways motor trucks of 100 common carrier lines and 125 contract carriers are currently operating. In 1945, the 49th Legislature of Texas legalized the movement of heaviest truck loads by raising the limit to 48,000 pounds or 24 tons.

West Texas is served on fast passenger and express hauls by five major commercial airlines. On file with the Civil Aeronautics Board are applications from 26 additional lines now operating elsewhere or ready to be formed, to supply additional service. Of the 173 commercial airports in Texas designated as Class A and better, 87 are at West Texas towns.

All traffic moves smoothly across our region under the nation's most favorable climatic conditions. West Texas rainfall varies from 30-35 inches annually in the eastern counties to minus 10 inches in the far west. The all-region record shows an annual average of 296 sunny days. Temperature rarely falls to zero or rises above 100 degrees. For factory operation West Texas weather is ideal.

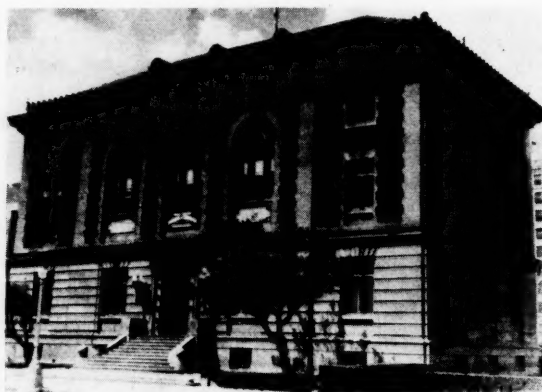
Industrial Opportunities

THE facts presented herein are in support of the firm conviction of the West Texas Chamber of Commerce that our region offers more to expanding and new industry than any other within the United States. We cite the following examples of industrial opportunities:

1. The territory markets 1,800,000 hides yearly, yet has not a factory for production of finished leather.
2. Producing a tenth of the nation's cotton supply, it has only two cotton textile mills.
3. Leading the state in wool and the nation in mohair production, it has only one woolen textile mill.
4. Having 57,000,000 tons of potash reserves, it has no potash plant.
5. With petroleum and natural gas reserves sufficient to carry the nation through a world war, it still is consuming on home industry only a negligible fraction of its potential supply.
6. Although being a vast storehouse of foods, it processes for the markets less than 1% of the home-grown production.

IN conclusion:

We have endeavored to tell simply and statistically the story of West Texas, the Raw Materials Capital of the World and Land of Industrial Opportunity. We feel that our region merits consideration as the location for a pleasant and prosperous business experience. We invite inquiries and solicit the opportunity to be of service.



Above: the WTCC's commodious headquarters building at Abilene. The organization also operates a branch office at Fort Worth, Tex.

For Full Information, WRITE or WIRE:

West Texas Chamber of Commerce

D. A. Bandeen, General Manager : : : : : ABILENE, TEXAS

WEST TEXAS TRANSPORTATION FACILITIES BLANKET AN AREA OF VAST NATURAL RESOURCES



YOU DON'T NEED GLASSES TO SEE THAT . . .

A friendly welcome awaits you in West Texas. Its industrial and agricultural opportunities are unlimited. Today, more than ever before, the eyes of business are on this "Land of Opportunity". Its amazing post war progress is but a continuation of its prewar development.

Paralleling the great expansion in this area, this company has from time to time increased its generating capacity and distribution system, well in advance of all customer demands. We are particularly proud of our unabiding faith in West Texas. Abundant electric power has been, and will continue to be provided so that all industry, large though it might be, can always be supplied.

We will gladly assist with detailed information concerning the industrial opportunities of West Texas—The Land of Opportunity.

**West Texas Utilities
Company**



Amarillo

TEXAS' 5th
MARKET

Ready Made Distribution Center

A MARILLO is the wholesale and distributing center for a Tri-State area with a population of 821,700. The nearest comparable market is 274 miles distant. Last year wholesale sales were \$158,375,000.00; retail sales, \$383,640,000.00; the income, \$693,991,000.00. Everything favors a "branch house" in Amarillo . . . for you!



Three great trunk rail lines radiate from Amarillo . . . the Santa Fe in four directions, the Rock Island in three directions and the Ft. Worth and Denver in two directions—linking Amarillo with all important trade centers in the Southwest and the Nation.



A network of truck and bus lines spreading from Amarillo, over Federal Highways 60, 66, 87 and 287, and over five State Highways, affords overnight delivery service throughout Amarillo's immediate trade area and prompt service to distant points.



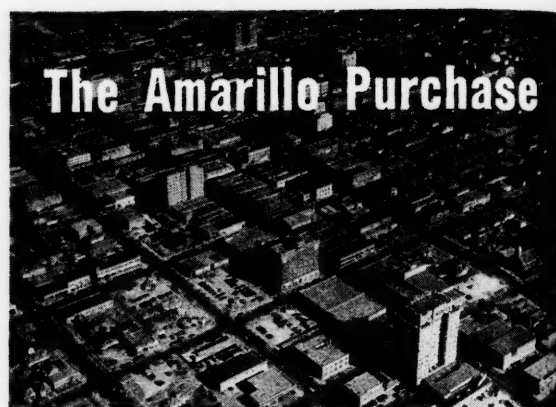
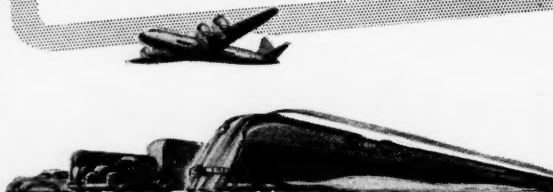
T. W. A., Braniff and Essair airlines, with a total of 32 flights daily, connect Amarillo directly with the nation's important trade centers. Feeder airlines already planned will tie Amarillo to most every town within its vast trade area.

Maps show actual connections with Amarillo.

GET THE COMPLETE STORY!

Write today for free brochure—"AMARILLO—Wholesale, Industrial and Retail Capital of a Rich New Empire!" Specific information gladly furnished on request.

CHAMBER OF COMMERCE, AMARILLO, TEXAS



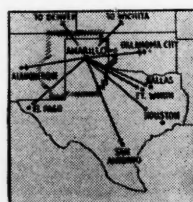
Business District, Amarillo, Texas.

PETER Minuit bought New York for \$24.00, some trinkets and a keg of rum. For Amarillo, Texas, however, the initial outlay was somewhat higher. In the Spring of 1887, two promoters paid Texas \$1,280.00 for 640 acres . . . the Amarillo area was born. First sale—\$24.00 for tent, table and chairs. But like New York, the Amarillo area grew . . . and grew! Today it numbers over 821,700 souls and is the \$158,375,642.00 distribution hub of an empire larger than the State of Pennsylvania. The list below sparks Amarillo's future!



1945 WHOLESALE VOLUME

Liquors and Wine ..	\$4,500,000	Hardware & Queens-ware	15,856,000
Beer	1,500,000	Hay, Grain & Feed, Cottonseed Cake, Hulls	7,387,000
Auto Accessories, Tires	5,461,000	Iron and Steel	750,000
Automobile, Pass.	6,127,000	Janitor Supplies	250,000
Automobile, Truck ..	2,747,000	Jewelry	250,000
Bakery	1,045,000	Junk	440,000
Boot, Shoe, Saddles	500,000	Livestock	15,698,400
Building Material ...	6,968,200	Meat, Poultry, Fish ..	4,721,150
Cigar, Tobacco	2,300,600	Musical Instruments & Sheet Music	98,160
Compressed Air, Oxygen, etc.	863,000	Office Equipment, Store Fixtures, Hotel Sup.	2,917,400
Coal, Wood & Ice ...	1,867,000	Optical Goods	275,000
Confectionery, Ice Cream, & Soft Drinks	3,042,000	Paint, Oil, Varnishes, Glass	2,257,000
Dairy, Poultry Products	6,824,961	Paper, Paper Goods .	2,031,000
Dental, Surgical Sup.	295,000	Photo-Engraving, Commercial Art	29,100
Drugs	4,850,000	Plumbing, Heating Fixtures & Supplies	2,498,000
Dry Goods, Notions ..	100,000	Radio	3,430,000
Electrical Appliances, Supplies, Signs	2,808,032	Stationery, Books, & Magazines	545,000
Farm Implements ...	16,245,000	Tanks, Culverts and Well Supplies	1,750,000
Florist	200,000	Trunks & Leather Goods	57,000
Fruits & Vegetables .	3,750,000	Beauty, Barber Sup.	341,142
Furniture, House Furnishings, Mattresses	1,720,000		
Gasoline, Oil, Alcohol & Anti-Freeze	15,000,000		
Grocery, Delicatessen	21,757,257	Total	\$158,375,642



Amarillo's nearest comparable, competitive city is 274 miles distant. The Amarillo area ranks 5th in Texas and is one of the nation's sixty key distributing markets. It is served conclusively by the Amarillo *Globe-News* which last year carried more national advertising than any similar-size paper.

Keeping Step



.. with the postwar industrial development of Texas

As dynamic Texas swings into an era of unprecedented peacetime industrial growth, the power resources of this company may be depended upon to keep pace. C. P. S. Co. power, unfailing in war, will be available in ample quantity to meet the needs of industry in the years of peacetime progress ahead.



GENERAL OFFICES: FORT WORTH, TEXAS

SERVING WEST TEXAS

WITH THE FINEST
IN PETROLEUM PRODUCTS

COSDEN Higher Octane GASOLINE

Cosden Ethyl Gasoline

Cosden Para-Fine Motor Oil

**Tractor Fuels
and
Lubricants**



COSDEN PETROLEUM CORP.

Offices—BIG SPRING

Refineries—BIG SPRING—GRAHAM

A West Texas Refinery Using
West Texas Crude, Employing
West Texas Labor, Paying
Taxes in West Texas.

Stop at the
sign of the
Cosden
Traffic Cop!

Amarillo

TEXAS' 5th
MARKET



Ideal Location for Small Industry

ALREADY one of the 60 Key Distributing Markets of the Nation . . . already the 5th Major Distributing Market Center of Texas . . . Amarillo is now designated as one of the 20 new Industrial and Manufacturing areas of the United States. \$116,750,000.00 in new capital have been invested here in the past five years. There's opportunity and room for you, too, in this rich new market.

UNUSUAL OPPORTUNITIES FOR MANUFACTURERS OF:

- ✓ Glass
- ✓ Pottery
- ✓ Toys
- ✓ Brick
- ✓ Sport Clothes
- ✓ Work Clothes
- ✓ Soap
- ✓ Mineralized and General Feeds
- ✓ Towels
- ✓ Gas Stoves
- ✓ Gloves
- ✓ Boxes
- ✓ Shoes
- ✓ Windmill Sucker Rods



Low Power Rates



Cheap Natural Gas



Water in Abundance



Rail, truck and air
transportation



Dependable Labor—94.6%
Native White



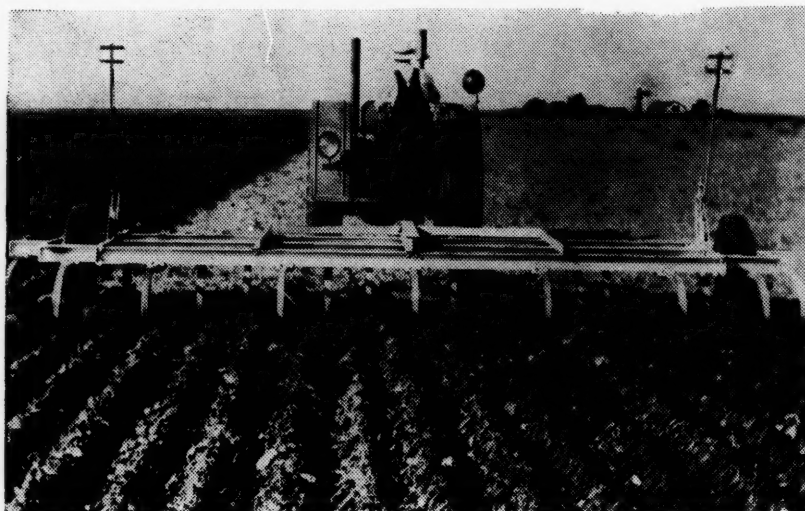
Plant sites, Construction and
Taxes Favorable



Inviting climate and
Living Conditions

GET THE COMPLETE STORY!
Write today for free brochure—
"AMARILLO—Wholesale, Industrial
and Retail Capital of a Rich New
Empire!" Data for specific indus-
tries gladly furnished on request.
CHAMBER OF COMMERCE
AMARILLO, TEXAS





THE WORLD'S LARGEST PLOW

SAVE SOIL — SAVE MOISTURE — STOP EROSION



IT BYPASSES THE WATER THROUGH THE
TOP SOIL INTO THE SUB-SOIL WHERE
IT IS STORED FOR CROP USE.

SIZES 8 TO 34 FEET



*It's easy to own the
famous patented GRAHAM-HOEME PLOW*

Modern production method in the manufacture of the Graham-Hoeme Plow has reduced its cost to a minimum. While it is an indispensable piece of equipment . . . you will find it easy to own.

Manufactured, Sold and Guaranteed by

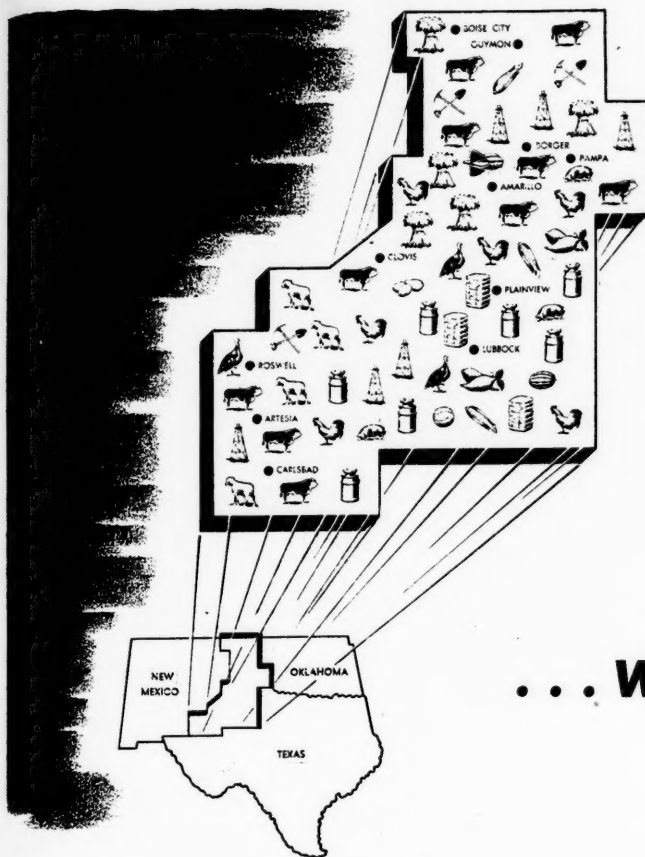
GRAHAM-HOEME PLOW COMPANY

AMARILLO, TEXAS

WE'RE ON THE MOVE



... WITH EVERYTHING
IT TAKES!



THE great Panhandle-Plains and Southeastern New Mexico area is really going places and we've got everything it takes when it comes to industry and agriculture. This area is the land of **NEW** opportunities. There are great possibilities here for all of us and our Company is doing its part by expanding its facilities to those who want and need our service—which is low cost, dependable electric power—a necessary adjunct to all industrial and agricultural progress—and better living in the home.

There is no better soil than in this territory for growing any number of important and profitable crops—including cotton, wheat, potatoes, alfalfa—and there's a ready market for everything you grow. . . . **OIL FIELDS** in this vast area are world-known. Everyone knows that our great peacetime industrial growth will demand more and more oil and natural gas. . . . **THE PANHANDLE-PLAINS** and SE New Mexico area is now producing vast supplies of dairy products, including millions of dollars in butter and cheese. . . . **YOU WILL** be amazed at the fine industrial opportunities in this area. Already we have scores of large and important industries in this area and from all indications, there will be many more industries attracted to this section of the country. . . . **EVERY YEAR** finds an increasing demand from all parts of the nation for sor-

ghums from this fertile area. Extensive tests have been made of our sorghums and experts tell us that they're the finest in the world. . . . **THE RANCHES** in the vast Panhandle-Plains and SE New Mexico area are turning out highest quality beef cattle . . . and good solid beef that's marketed all over the United States. This territory now produces far more than two million head of beef cattle annually. . . . **EVERYONE KNOWS** that the climate in the Panhandle-Plains and SE New Mexico is ideal. Cool, invigorating summer nights and our moderate winters keep us comfortable and healthy the year 'round . . . and the scenery is gorgeous. Yes, we really have something to talk about in the Panhandle-Plains and SE New Mexico—we're going places with everything it takes.

SOUTHWESTERN
PUBLIC SERVICE
COMPANY

21 YEARS OF GOOD CITIZENSHIP AND PUBLIC SERVICE

WEST TEXAS—*Land of Opportunity!*

West Texas has available for business and industry all of these things: excellent transportation facilities • favorable climate • dependable labor supply • an abundance of many kinds of raw materials • ample electric power and water • and a plentiful supply of low-cost natural gas fuel.

Among the natural resources and raw materials available in quantity are: petroleum and its products, carbon black, helium, wheat, cotton, grain sorghums, beef cattle, sheep, wool and mohair, hogs, zinc, potash, brick and tile shale, cement limestone, and a long list of other minerals whose development has barely begun.

OPPORTUNITIES ARE PARTICULARLY GOOD FOR COTTON TEXTILE MILLS, WOOLEN TEXTILE MILLS, LEATHER FACTORIES, POTASH PLANTS, AND FOOD PROCESSING PLANTS.

AMARILLO GAS COMPANY
Amarillo, Texas

WEST TEXAS GAS COMPANY
Lubbock, Texas

FORT WORTH

The Nation's Sheep Capital

For two consecutive years the Fort Worth Livestock Market handled more sheep than any other market in the nation, 2,657,226 head in 1944 and 2,713,524 in 1945.

THERE'S A REASON

Operating on this market are buyers for all the major packing companies and numerous buyers representing smaller packers. Also order buyers supplying the stocker and feeder trade over the nation—the greatest assembly of sheep buyers in the southwest.

The Stockyard management, anticipating the increased sheep marketing, erected a large addition to the sheep division last year and have recently completed another addition, including an additional scale and numerous sorting chutes, etc., which will greatly speed up the extra handling necessary for subsidy purposes, and also provide for more prompt and efficient handling of the increased volume of sheep receipts expected this year.

"Fort Worth Marches On"

CHILDRESS

GATEWAY TO THE FAST DEVELOPING PANHANDLE-PLAINS SECTION

Ideal Wholesale, Retail and Manufacturing location, serving 200,000 prosperous people in a sixty-mile radius, embracing 15 rich agricultural counties . . . 10,000 head beef cattle in county; 20,000 to 30,000 bales of cotton ginned in county annually; 4,000 head dairy cattle in county producing 2,000,000 gallons milk annually; 500,000 chicks hatched annually in county.

A network of railroads and highways lead to every section of the country. Labor, taxes, power, fuel and water rates favorable.

Investigate Childress before you locate.

CHAMBER of COMMERCE
and BOARD of CITY DEVELOPMENT

PAUL ORD, Manager

CHILDRESS, TEXAS

The Prettiest Opportunity in West Texas

Big Spring has :

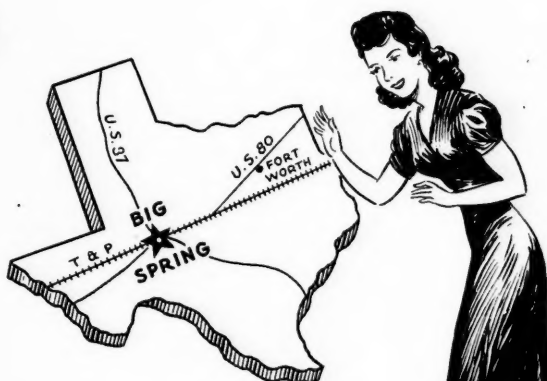
Rich Mineral and Agricultural Resources
—Oil, livestock, grain, feedstuffs, cotton

Excellent Transportation Facilities—Rail,
Highway and air routes for rapid distribution of products

Ample and Dependable Utility Services
—Electric power, natural gas, water

Healthful climate; excellent hospitals, clinics; attractive homes; fine schools; recreation

Look to West Texas, the last REAL frontier
—rich in undeveloped natural resources and populated by people who still believe in the free enterprise system.



Address inquiries to:

Big Spring
Chamber of Commerce
Big Spring, Texas

✓ CHECK DENTON

The head of a high type industrial concern—largest manufacturer in the world in his line—with eleven factories in the U. S. and Canada—after reaching a decision to locate a million dollar plant in Denton, Texas, said :

"We have occupied a temporary location in Dallas for the past year, during which time we have been constantly looking for a suitable place to establish permanent headquarters for our Southern division. After considering every city within a radius of 300 miles and checking from every angle we finally decided on Denton because—none of them met all our requirements as well as Denton, Texas."

This manufacturer said the survey his company used contained 23 major points to be taken into consideration before reaching a final decision and that Denton measured up better. Therefore he is beginning construction immediately on the new plant and building.

If you are planning to establish a plant in the Southwest, check Denton, Texas point by point.
Write or wire for full information :

CHAMBER OF COMMERCE

DENTON — TEXAS

"America's Ideal Home City"

✓ PLENTIFUL LABOR SUPPLY

(Thickly populated county, 93% native white, intelligent, well educated, ambitious, easily trained for any skilled job opportunities.)

✓ SOUTHWEST'S BEST MARKETS

(Less than 40 miles to Dallas and Ft. Worth. 192 miles from Oklahoma City, 280 miles from Houston. Here you have all the advantages of big city markets and small town living conditions.)

✓ EDUCATIONAL ADVANTAGES

(Two of the largest state supported colleges in the Nation where you and your employees can educate your families at minimum cost and have access to all cultural and entertainment activities of the very highest type.)

✓ HELPFUL COMMUNITY

(Cooperative helpful community attitude that will take an interest in your problems and help you work them out.)

✓ NATURAL GAS AND POWER

(Plenty of natural gas, Railroad facilities, electric power, all other utilities at lowest cost.)

✓ IDEAL CLIMATE

(Costs less to build and operate your plant, build and furnish homes—where the sun shines 285 days out of each year.)



★ UNITED CARBON BLACKS are dependable and uniform, playing an important part in the manufacture of better tires, tubes, mechanical rubber goods, printing inks, paints, fertilizer and other essential products.

★ The port of Houston, Texas, handles more carbon black than any other port in the world. UNITED CARBON BLACKS are a major factor in this achievement.

UNITED CARBON COMPANY, INC.

CHARLESTON 27, W. VA.

NEW YORK • AKRON • CHICAGO

Check...



the *El Paso* Industrial Area

✓TRANSPORTATION

Railroads radiate in every direction. Four airlines offer numerous passenger and cargo flights. Truck lines serve every portion of our area. Freight rates are favorable. Our Freight Bureau is at your service.

✓FUEL

Natural Gas is available from nearby fields. Unlimited supply and low rates make it an economical industrial fuel.

✓HEATING COSTS

Cost of heating is extremely low, as we are in the 80% Sunshine Area.

✓AIR CONDITIONING

Due to low humidity, modern evaporative coolers work perfectly. It is easy and economical to accurately air-condition large areas.

✓NATURAL RESOURCES

Few areas are richer in varied natural resources.

✓POWER

A dependable supply of low-cost electric power is available from a progressive utility interested in expanding its industrial load.

This progressive, sincerely helpful area invites your careful analysis of the many advantages it offers those considering locating new plants, warehouses, sales offices. The complete services of our competent Industrial Department are available to you for general information and specific research.

✓FACTORY SITES

Numerous strategically located, level sites, with utilities and trackage, if desired, are available.

✓LABOR

The El Paso Industrial area has an abundant supply of good labor, not cheap nor expensive. Our labor market is a happy one. Our people are quick to learn new processes; they are free from most Big City disadvantages.

✓TAXES

City, county, and state taxes are comparatively low, services good. There are no state inheritance or business taxes.

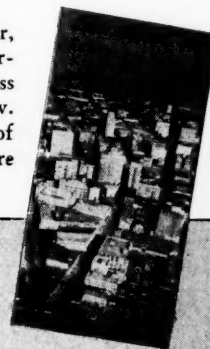
✓EXPORTS-IMPORTS

El Paso is the business center of the Mexican Border. A rich market awaits American manufacturers in Mexico. And Mexico is an important source of raw materials easily available to El Paso.

✓MARKETS

The El Paso area is an ideal, ready-made market for many products. The vast and increasingly important southwest deserves serious consideration. On many commodities, the nation is El Paso's market.

We have recently prepared a factual folder, giving rather complete and detailed information on many subjects which a business man considering this area will want to know. It is yours for the asking. An exchange of correspondence is cordially invited. We are at your service.



**INDUSTRIAL DEPARTMENT
EL PASO CHAMBER OF COMMERCE**

310 San Francisco Street

El Paso, Texas



*The Sign Of
Quality!*

VALVES HYDRANTS

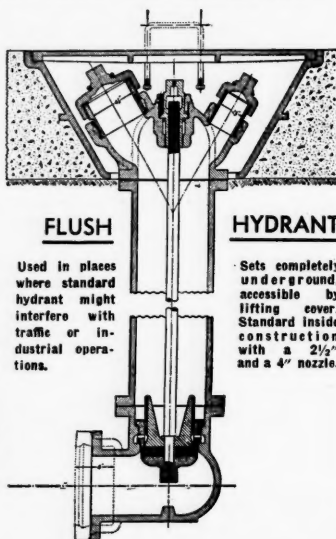
and pipe line accessories



Gate Valve



Check Valve



FLUSH

Used in places where standard hydrant might interfere with traffic or industrial operations.

HYDRANT

Sets completely underground, accessible by lifting cover. Standard inside construction with a 2 1/2" and a 4" nozzle.

M & H GATE VALVES are cast iron body, bronze mounted, with double-disc parallel seat or solid wedge type, non-rising stem or outside screw yoke. They come either with flanged or screwed connections. Valves for fire protection lines are marked "UA-FM" to denote approval of both the Underwriters and the Factory mutuals.

M & H FIRE HYDRANTS are revolving head, dry top, bronze mounted. They also are approved by "UA-FM". Entire main valve assembly is removable through barrel without digging. Special Traffic Model is fitted with breakable bolts and stem coupling, designed to break at ground under impact. Repairs are made simply by renewing bolts and coupling, without shutting off the water.

M & H PRODUCTS INCLUDE

FIRE HYDRANTS
GATE VALVES
TAPPING VALVES
WALL CASTINGS
SPECIAL CASTINGS
TAPPING SLEEVES
CHECK VALVES
FLOOR STANDS
EXTENSION STEMS

SHEAR GATES
MUD VALVES
VALVE BOXES
FLAP VALVES
SLUDGE SHOES
FLANGE AND
FLARE FITTINGS
FLANGED FITTINGS
B & S FITTINGS
CUTTING-IN TEES

M & H VALVE AND FITTINGS COMPANY

ANNISTON, ALABAMA

Modern Casey at the Bat

By H. I. PHILLIPS

Published in his column *The Sun Dial* in the New York Sun.

The outlook wasn't brilliant for the Mudville nine that day; The score stood four to two, with but one inning more to play; And so when Cooney died at first and Barrows did the same A sickly silence fell upon the patrons of the game.

A straggling few got up to go in deep despair. The rest Clung to the hope that springs eternal in the human breast. They thought if only Casey could but get a whack, at that, They'd put up even money now, with Casey at the bat.

But Flynn was out on unpaid dues and Blake was out because The local had convicted him of breaking union laws; So upon that stricken multitude grim melancholy sat For it seemed it might take Truman to get Casey to the bat.

But mediators gathered; and they handed down the word To put a man on second and assign a sub to third; The players raised a protest but in time they said "Okay, It's better than to have the Army in upon the play."

Then from the gladdened multitude went up a joyous yell; It bounded from the mountain-top and rattled in the dell; It struck upon the hillside, and recoiled upon the flat, For Casey, mighty Casey, was advancing to the bat.

Ten thousand eyes were on him as he rubbed his hands with dirt, And wiped them, by the rule book, upon his union shirt; As Local Thirty's hurler ground the ball into his hip Defiance gleamed in Casey's eye, a sneer curled Casey's lip.

And now the leather-covered sphere came hurtling through the air

As Casey raised a banner with the printed word "UNFAIR." Close by the sturdy batsman the ball unheeded sped. "Enslaver," muttered Casey. "Strike one," the umpire said.

"Kill him! Kill the umpire!" shouted someone in the stand But Casey bade them "Silence. A fact-finding board's at hand!"

"Conspiracy," thought Casey, but a smile upon him shone; He stilled the rising tumult; he bade the game go on; He signaled to the pitcher, and once more the spheroid flew, But Casey still ignored it, and the umpire said "Strike two!"

His teammates from the dugout rushed with angry cries of "Fraud,"

(Now Schwellenbach was frightened stiff, and Truman, too, was awed);

Fact-finders huddled quickly; Steelman leaped into the breach And somewhere in the distance Pepper made another speech.

Oh, somewhere in this distraught land the sun is shining bright,

The band is playing somewhere, and somewhere hearts are light;

And somewhere men are laughing, and somewhere children shout,

But there is no joy in Mudville . . . mighty Casey has WALKED OUT!

WEST TEXAS HAS TWO IMPORTANT ESSENTIALS FOR FACTORY OWNERS SEEKING LOCATIONS

- ABUNDANT RAW MATERIALS
- DEPENDABLE ELECTRIC POWER

Fort Worth and the West Texas areas served by Texas Electric Service Company are part of a vast empire peopled by an alert, vigorous and forward-looking citizenship that offers exceptional opportunities to new industries and to old industries seeking a better location. Few sections of the country have such a variety of natural resources and raw materials awaiting further industrial development, and few sections of the United States have shown such remarkable growth in population in the last two decades.

We will gladly supply or help you obtain detailed information concerning the industrial opportunities in the West Texas cities and towns we serve. Power transmission lines of the Texas Electric Service Company, supplied by large steam electric generating stations, assure adequate, dependable and economical electric power to this large and prosperous area in West Texas.

TEXAS ELECTRIC SERVICE COMPANY

General Office: FORT WORTH, TEXAS

SERVING Fort Worth, Wichita Falls, Big Spring, Sweetwater, Odessa, Midland, Lamesa, Grand Prairie, Breckenridge, Arlington, Colorado City, Graham, Ranger, Eastland, Monahans, Snyder, Crane, Henrietta, Iowa Park, Wink, Archer City, Bellevue, Andrews, O'Donnell, DeLeon, Gorman, Roscoe, Loraine, Stanton and other towns and communities in an integrated area of industrial and agricultural West Texas.



ELECTRIC POWER

The KEY to Industrial Progress

Every city and town served from the power system of Texas Electric Service Company has this KEY to Industrial Progress and can offer to factory owners big city electric service with the advantages of a small city location.

Memo to Business Executives ~
**IT WILL PAY YOU WELL TO
FIT *Your* NEW PLANT
INTO THIS PICTURE**

If you are interested in locating a new plant where all factors are favorable to economical, year-round production, and where you will have, at your door, the Greater Southwest with thirteen billion dollars in spendable income, **YOU WILL BE INTERESTED IN FORT WORTH.**

Here in Fort Worth, you will find a climate so mild and pleasant that you can maintain peak production throughout the year. You will find, too...cheap power and fuel...an abundant supply of good water...ample reserves of intelligent, native-born workers...most complete railroad, highway and air transportation services in the Southwest...and excellent industrial sites at reasonable prices.

Other advantages which Fort Worth offers are...reasonable taxes...a community property law...no state income taxes...no sales taxes.

When you locate your plant in Fort Worth, you will have close at hand the rich abundance of varied basic materials produced in the Lone Star State. Most manufacturers will find many of the materials that go into their products right at their door.

On the sales side, you will have in Fort Worth and the territory it serves a great and growing market for your products. Individual incomes are high and

CHAMBER OF COMMERCE



RECENT AIRPLANE VIEW OF FORT WORTH, TEXAS

consumer purchases compare favorably with all other sections of the country. The people who make up the Fort Worth market have the money and inclination to buy the things you manufacture.

One more fact that in the long run can be most important of all to manufacturers and distributors with plants and warehouses at Fort Worth: the great Trinity River Watershed Program, which includes plans for the creation of a canal up the Trinity with its terminus at Fort Worth, was approved in principle when Congress passed the 1944 Flood Control and the 1945 River and Harbor Improvement Acts. While actual barge traffic on the Trinity Canal is still in the future, manufacturers and distributors who locate in Fort Worth will be in preferred position to share in the prosperity which will result from this vast construction program and in due time from their location at the inland terminal of the Trinity Canal.

Why not get complete information about Fort Worth now?

*Address Your Request for Information to
Industrial Department*

CLIP THIS TO YOUR LETTERHEAD AND MAIL

Mr. Business Executive

If you are contemplating the opening of a plant or warehouse and are seeking the right location, you are urged to get the facts about Fort Worth. Just sign and mail.

NAME _____

TITLE _____

FORT WORTH, TEXAS

Bountiful Texas



The Land of Abundance

More than 80,000 carloads of fresh fruits and fresh vegetables were shipped to market by Texas growers in 1945—During the present food crisis, Texas is contributing a large share in supplying finest food for the nation.

BEN E. KEITH COMPANY

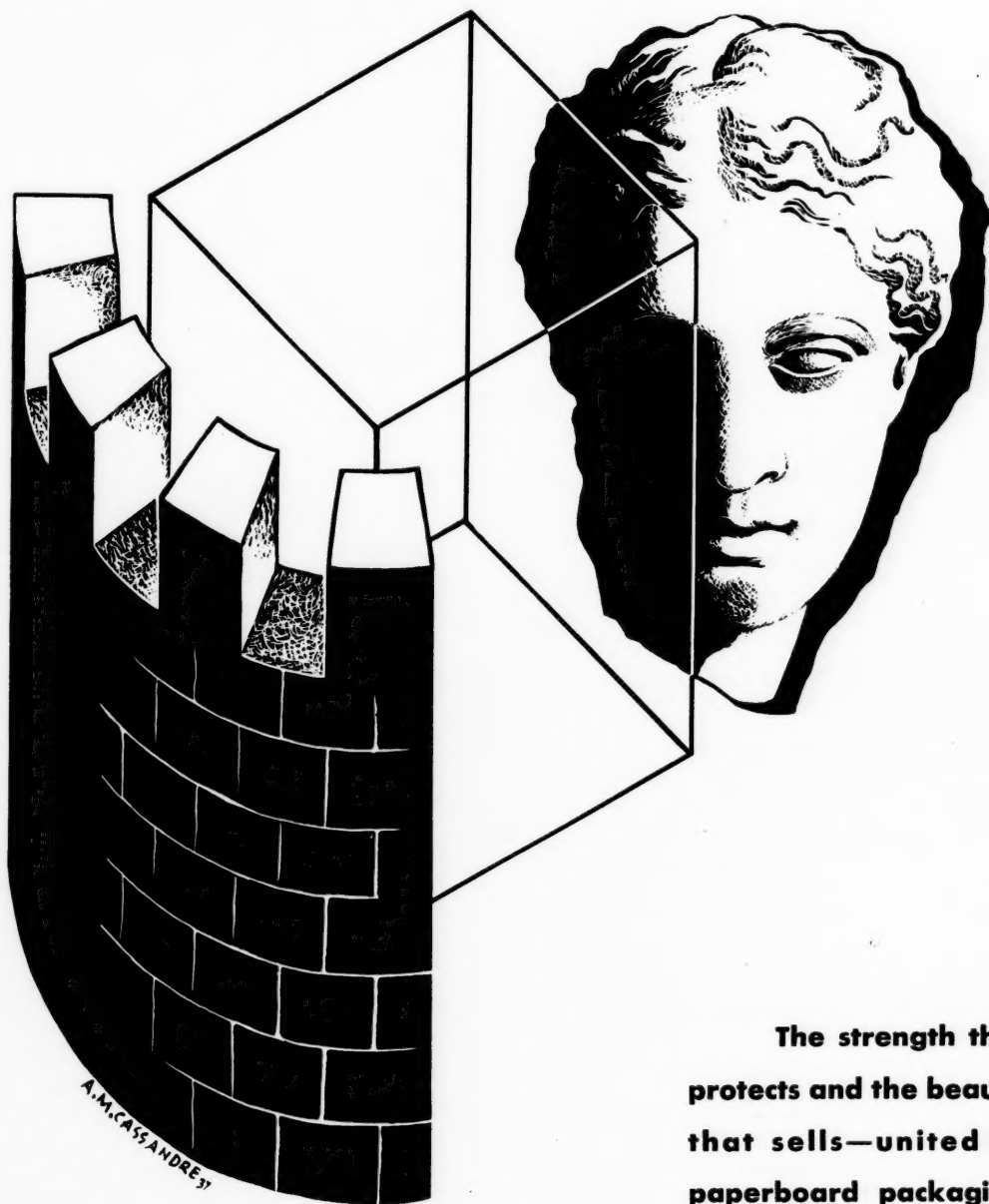
*Largest Distributors of Fresh and Frozen
Fruits and Vegetables in the Southwest*

DALLAS
FORT WORTH

ABILENE
LONGVIEW

LUBBOCK
WICHITA FALLS

STRENGTH & BEAUTY



The strength that
protects and the beauty
that sells—united in
paperboard packaging

CONTAINER CORPORATION OF AMERICA

SOUTHWEST DIVISION, FORT WORTH, TEXAS

STEEL BARS

Rail Steel Reinforcing

and

Electric Steel Bars

Rolled by

TEXAS STEEL COMPANY

FORT WORTH 9, TEXAS



For 40 Years
No Finer Name
In Candy—

King's
Chocolates
for AMERICAN QUEENS

King Candy Company
Fort Worth, Texas

Established 1906

the Spicy Tana
of the Southwest

Flavor magic! Taste it, enjoy it, in famous
Ranch Style Beans. Rich in hearty, zestful
goodness... temptingly seasoned... Ranch
Style Beans! Packed in the Southwest... a
favorite with those who enjoy fine foods.



RANCH STYLE BEANS

GREAT WESTERN FOODS CO.
FORT WORTH, TEXAS

ELECTRIC STEEL CASTINGS

CARBON STEEL

ALLOY STEEL

Manufactured by

TEXAS STEEL COMPANY

FORT WORTH 9, TEXAS

WHERE TO BUY

THEATRE CHAIRS SCHOOL SEATING

Very Latest & Newest Types.

MANUFACTURED COMPLETELY
BY CRAFTSMEN, WHO KNOW HOW.

*What Texas Makes, Makes
the Nation.*

American Desk Manufacturing Co.

Office and Factory
TEMPLE, TEXAS

SERVING TEXAS Since 1910

MANUFACTURERS of LOWN Slip Roll Forming
Machines and Special Machines.

DIESEL Repair Parts, Featuring Centrifugal Cast
Cylinder Liners and Pump Plungers, Various Alloys.
Also Pistons, Valves and other parts made to order.

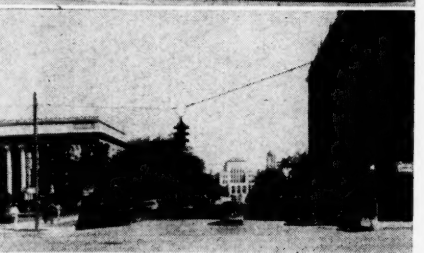
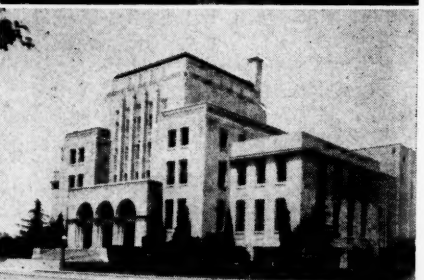
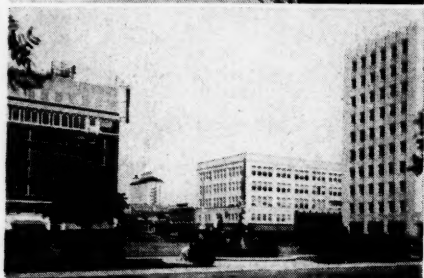
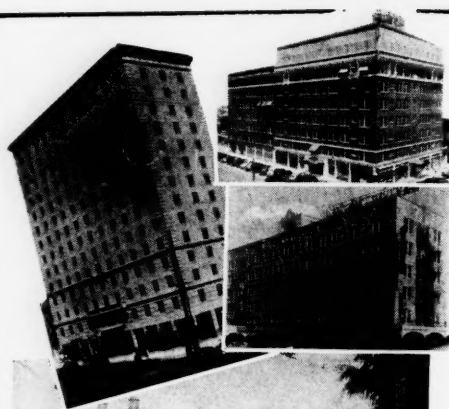
SAN ANGELO FOUNDRY & MACHINE COMPANY

E. Upton St.

SAN ANGELO, TEXAS

Phone 4442

"Dealers in Principal Industrial Cities Throughout U.S.A."



For You . . .

There's A Spot in Texas—

San Angelo!

San Angelo invites you to investigate its resources—its available raw products . . . its ever-abundant water supply . . . its friendly people who welcome every opportunity of extending the hand of fellowship to new industries. Your inquiries invited—your questions gladly answered.

ELECTRICAL ENERGY . . .

San Angelo contains the largest power generating plant in West Texas, as well as highline connections with affiliated plants assuring plenty of uninterrupted power for every project.

WATER SUPPLY . . .

San Angelo has the largest and most adequate water supply of any city in West Texas. It includes a series of dams on the Concho River, with a reserve of 63,000,000,000 (billions) gallons, augmented by hundreds of natural springs. The U. S. Government has allocated the money for the construction of a new dam, which will add 50,000 acre-feet of water for domestic and industrial use.

NATURAL GAS FOR FUEL . . .

An abundant supply of natural gas from nearby wells, producing over 200 million cubic feet daily, assuring plenty of clean, convenient fuel for every operation.

LABOR POOL . . .

A tremendous skilled-labor pool, 90% of whom are native-born, white American citizens, attached to the soil by virtue of owning their homes in San Angelo. The two great government-operated Air Fields during the war furnished their training in handling precision tools and equipment.

TRANSPORTATION—RAW MATERIALS . . .

San Angelo has 2 railroads, 4 motor freight lines, 3 airlines, and a wide network of buses . . . Plenty of Cotton for plastics . . . Hides for Leather Goods . . . Wool and Mohair for Textiles . . . Sorghum Grain for Alcohol . . . all produced within a few miles of San Angelo.

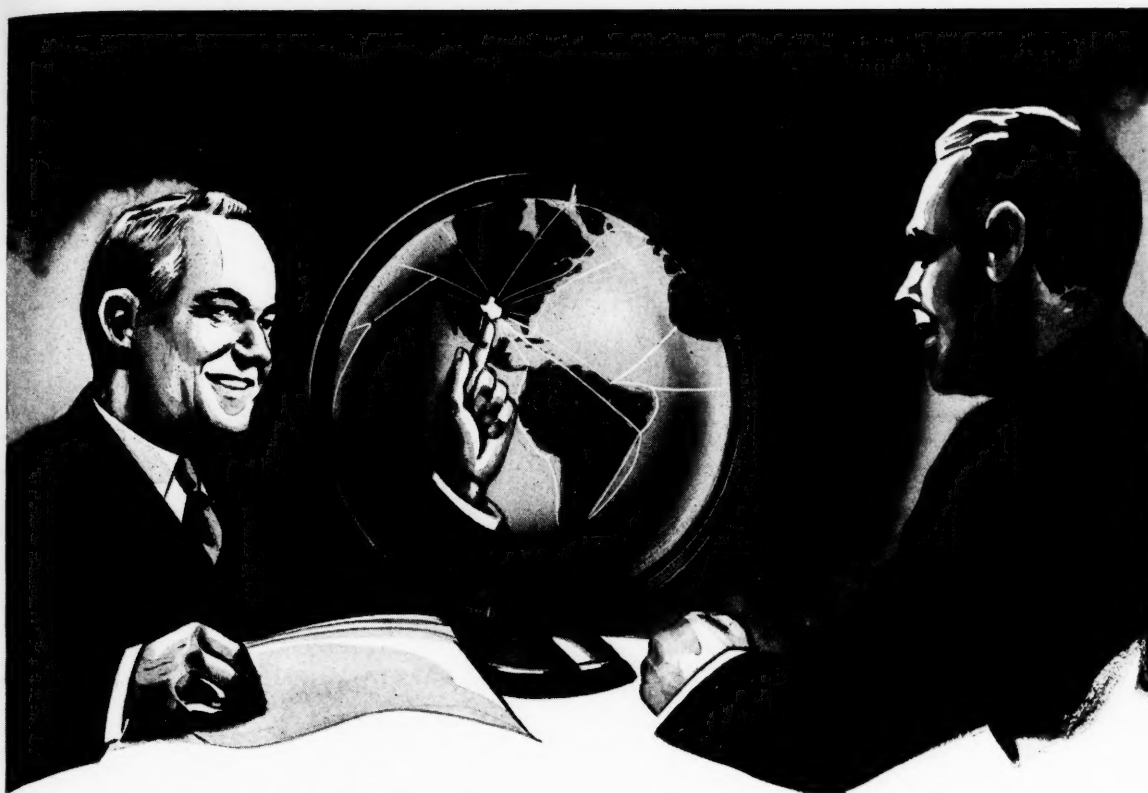
ATTRACTIVE TAX RATE . . .

Not only is the tax rate in San Angelo fair, but it is indeed attractive . . . A competent City Manager form of Government . . . Adequate schools and churches . . . Recreational facilities unrivaled in West Texas are only a few of the attractions offered by this progressive West Texas City. Official C. R. B. A. Estimate of Metropolitan San Angelo, February 24, 1946, was 45,206.

Write for specific data pertaining to your individual needs, or better yet, visit the Queen City of the Conchos and see for yourself.

Board of City Development SAN ANGELO, TEXAS

1. 3 of San Angelo's Fine Hotels . . . There are others not pictured here
2. The Largest Power-generating Plant in West Texas
3. A View of part of City's clean skyline
4. South Concho River near City
5. Municipal Auditorium
6. View of the wide downtown streets



TEXAS *At the Crossroads to World Trade*

Strategically located for world shipping and destined to become the crossroads of world air traffic, Texas today stands on the threshold of the greatest period in her history. Rich in resources that make the Southwest a commercial center, Texas leads the world in the production of oil, gas, sulphur, helium and carbon black; Texas produces about a fourth of the Nation's cotton, eighty-five per cent of the mohair and more wool than any other two states combined—yet this vast state is rich in resources that have scarcely been tapped. Making Texas a mecca for industrialists seeking new opportunities is her abundance of cheap electric power, her transportation and port facilities, her unlimited resources and manpower, and her mild climate and living conditions. The eyes of the nation's industrialists look to Texas, which proved its industrial ability by producing more than six billion dollars worth of war materials—thousands of planes, tons of steel, gears, explosives, chemicals, magnesium, synthetic rubber. To American industry, Texas offers unlimited post-war OPPORTUNITIES.

To Texas Industry, the Texas Employers' Insurance Association offers a complete, highly specialized underwriting, claims and safety engineering service on Workmen's Compensation Insurance. During 1945, the Association had a premium income of \$7,079,000.00, and returned \$1,377,185.32 in dividends to policyholders, in addition to \$457,695.32 in guaranteed cost discounts allowed. The Texas Employers' Insurance Association operates in Texas only.

**TEXAS EMPLOYERS
INSURANCE ASSOCIATION**

DALLAS	HOUSTON	FORT WORTH	SAN ANTONIO	ABILENE	AMARILLO	AUSTIN	BEAUMONT	CORPUS CHRISTI
EL PASO	GALVESTON	HARLINGEN	LUBBOCK	MIDLAND	PORT ARTHUR	SHERMAN	TYLER	WACO
								WICHITA FALLS

Naturally



It's A NATIONAL

When the analytical mind runs the gamut of great accomplishments it naturally turns to Texas . . . for Texas provides "*Millions for Markets*," the world over. Whether it be barrels, bales, acres or tons, Texans subscribe to *quality* as well as *quantity* in the products they produce. Take for example the 19 Texas Affiliated National Hotels . . . affording more than 4,000 modernly appointed guest rooms designed for your comfort as a Texas Traveler.

One of many large Texas institutions, national in scope, Affiliated National Hotels have instilled the Texas tradition of friendliness in the additional 17 National Hotels in 10 other states and our Nation's Capital. Whenever you hear folks commenting about a good hotel, eavesdrop a little and invariably you will learn that "*Naturally it's a National!*"

A FRIENDLY HOTEL IN CONVENIENT TEXAS CITIES

HOTEL STEPHEN F. AUSTIN	Austin
HOTEL EDSON	Beaumont
HOTEL BROWNWOOD	Brownwood
HOTEL CORTEZ	El Paso
HOTEL TEXAS	Fort Worth
HOTEL BUCCANEER	Galveston
HOTEL GALVEZ	Galveston
HOTEL JEAN LAFITTE	Galveston
CORONADO COURTS	Galveston
JACK TAR COURT HOTEL	Galveston
MIRAMAR COURT	Galveston
HOTEL CAVALIER	Galveston
HOTEL PLAZA	Laredo
HOTEL LUBBOCK	Lubbock
HOTEL FALLS	Marlin
HOTEL CACTUS	San Angelo
HOTEL MENDER	San Antonio
ANGELES COURT	San Antonio

OTHER Affiliated NATIONAL HOTELS

ALABAMA	
HOTEL ADMIRAL SEMMES	Mobile
HOTEL THOMAS JEFFERSON	Birmingham
DISTRICT OF COLUMBIA	
HOTEL WASHINGTON	Washington
ILLINOIS	
HOTEL FAUST	Rockford
INDIANA	
HOTEL CLAYPOOL	Indianapolis
LOUISIANA	
JUNG HOTEL	New Orleans
HOTEL DESOTO	New Orleans
MISSISSIPPI	
HOTEL LAMAR	Meridian
NEBRASKA	
HOTEL PAXTON	Omaha
NEW MEXICO	
HOTEL CLOVIS	Clovis
OKLAHOMA	
HOTEL ALDRIDGE	Wewoka
SOUTH CAROLINA	
HOTEL WADE HAMPTON	Columbia
VIRGINIA	
HOTEL MOUNTAIN LAKE	Mountain Lake



BUREAUCRACY ASSAILED

There is a serious and growing conviction that if government would, for a brief period, forget its paternalistic activities and devote all its efforts to getting the country back on a full production basis, it wouldn't take us long to snap out of the doldrums.

In support of this, we offer the following quotations:

From the *Commercial and Financial Chronicle*:

"Worldwide and domestic problems, whether threat of starvation, or housing shortages, etc., are the inevitable results of new economic and social philosophies that have paternalism and totalitarianism as underlying strata. By placing 'other objectives' ahead of production, these philosophies are responsible for shortages both abroad and at home. Thus, progress toward restoring our economy to healthful vigor is discouraging, and the administration seems more interested in maintaining planned economy than in following the one road to plenty—production."

From Henry Hazlitt's column in the *New York Times*:

"In restricting production all over the world, government price-fixing has played a major role. But, in spite of mounting chaos and famine, no government official anywhere seems to lose his confidence that he can settle matters better than a free market or the law of supply and demand. It is true that each official has a different remedy from the others."

From an address of Senator Kenneth Wherry:

"Vicious use of the unprecedented power of Washington bureaucracy in a planned program to perpetuate itself is directly responsible for the present confusion in government, business, agriculture and labor"

From an address of Governor Ralph F. Gates of Indiana:

"Confusion is what is the matter with the United States today, and it is confusion that is centralized, like almost everything else, in Washington"

* * * * *

" The Federal Government has been trying to do too many things. It has assumed jurisdiction and responsibility for individual, corporate and state problems. It tries to tell me how to run this state—it tries to tell you how to live your life and run your business."

* * * * *

"One out of every 37 of our citizens is now working for the Government—and we can see the increasing pressure of Federal encroachment even out here in Indiana. This city of Indianapolis is a long way from Washington, but already the Federal Government occupies 11 per cent of all the available office space in downtown Indianapolis—and it is asking for more"

* * * * *

"The highly advanced Federal bureaucracy shares at least one viewpoint with the totalitarian governments — a profound contempt for the individual's ability to take care of himself. We have ceased to be citizens and are becoming wards."

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America's Top-Quality Tires Are Now Rolling Out Of Texas' First Tire Factory

November 13, 1944, marked a new chapter in the industrial progress of Texas . . . and of The General Tire & Rubber Company.

For on that day, the first tire ever built in Texas passed final inspection in General's huge, new plant at Waco.

Now, less than two years later, thousands upon thousands of top-quality Generals . . .

made from Texas' raw materials, by Texans, for Texans . . . are rolling up records of long, safe, satisfactory service over the highways of the great, rambling South and Southwest.

Proof, indeed, that Texans have the natural skill and resourcefulness to venture into new fields of modern industry with marked success.

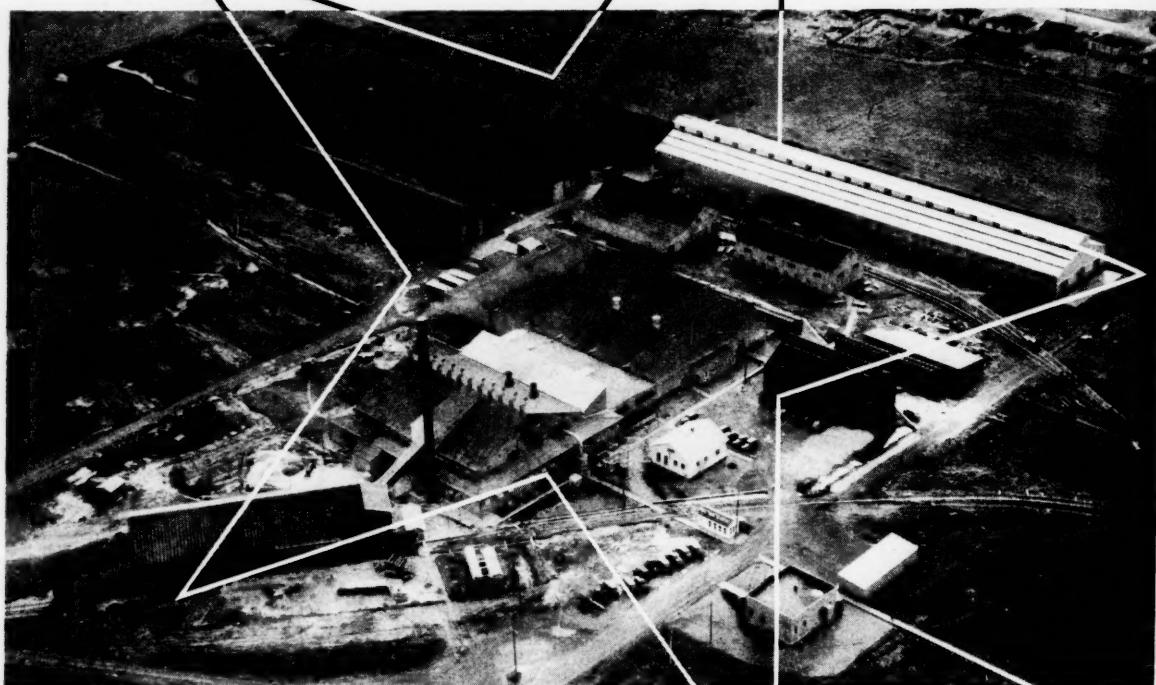
THE GENERAL TIRE & RUBBER CO.

WACO, TEXAS

AKRON, OHIO

ONWARD

Texas



Air View, Wichita Falls Branch,

Ball

BROTHERS COMPANY

The Wichita Falls plant of Ball Brothers Company is well located to supply the heavy demand for Ball Jars, Caps, Lids and Rubbers in the State of Texas and adjoining territory. Our faith in the industrial future of the great State of Texas and the foresight and energy of its citizens is strong. We share with Texans the hope for even greater development of manufacturing facilities in the Lone Star State.

BALL BROTHERS COMPANY

General Offices—MUNCIE, INDIANA

TEXAS Branch ————— Wichita Falls, Texas





AERIAL VIEW OF WICHITA FALLS, TEXAS

Mr. Manufacturer:-



SCENE AT COUNTRY CLUB GOLF COURSE

WICHITA FALLS, TEXAS

HAS WHAT IT TAKES

For Successful Manufacturing!

WE'LL GIVE IT TO YOU IN A "NUTSHELL":

(1) Texas has the most favorable tax laws for industry of any potential industrial development area. Most progressive labor laws.

(2) Texas has no state income tax for either individuals or manufacturers. One of 7 states having "community property tax" law; low inheritance tax, and low valuations by taxing authorities for all industries. *No Sales Tax.*

(3) Wichita Falls has 98 per cent native born labor. 91 per cent white. Highest per man hour rate of production of any section of the nation. Highly intelligent and loyal under fair working conditions. Both female and male labor, semi-skilled or skilled available for most types of industry.

(4) Wichita Falls has an abundance of natural gas and electricity at unusually low rates. Geographic location lends itself to low cost heating and economical distribution.

(5) Wichita Falls has first class transportation; major airlines, trunk-line railways and a network of paved highways to all points in Southwest.

(6) Wichita Falls and its large trade territory rank among the top areas in the nation as having the highest per capita purchasing power.

(7) Wichita Falls' progressive business men have organized the Industrial Foundation, Inc., to provide buildings on fair rental basis for new industries.

(8) Wichita Falls has some highly desirable Army Air Forces facilities, including all-steel hangars available on reasonable lease terms.

(9) Wichita Falls is justly proud of her public schools and Hardin Junior College that offer widely varied curriculum through junior college level.

(10) Wichita Falls has health recreation, cultural and religious facilities par excellent.

Write or wire for special Industrial Prospectus

WICHITA FALLS CHAMBER OF COMMERCE

Wichita Falls, Texas

TYPICAL HOMES IN WICHITA FALLS



IN ALL WEST TEXAS SWEETWATER

offers unexcelled industrial opportunities for new locations and branch plants.

Railroads in six directions, transcontinental highways and fine airport facilities make Sweetwater the distribution hub of this rich territory.

Already the home of several large manufacturing plants of national scope, the 14,000 population is industry conscious.

Sites are reasonable, taxes equitable, fuel rates competitive and water unlimited.

There's a big back yard, too, for your employees to play in. There's hunting, fishing and horseback riding, with educational and cultural advantages.

An all-year temperate climate adds to the zest of living in Sweetwater.

Write today to L. A. Wilke,
Manager

BOARD OF CITY DEVELOPMENT

(A Tax Supported Chamber of Commerce)

Sweetwater, Texas

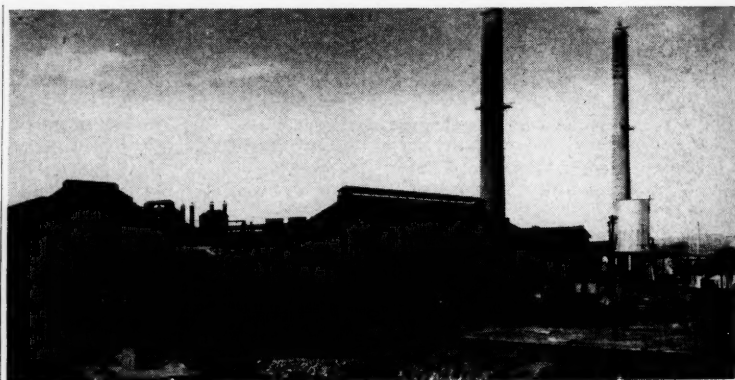
WELL MACHINERY & SUPPLY CO. Headquarters for Industrial Supplies

★ Transmission Equipment

- ★ Engines
- ★ Packings
- ★ Hose
- ★ Trucks
- ★ Meters
- ★ Machine Tools
- ★ Scales
- ★ Pumps
- ★ Fire Equipment
- ★ Hand Tools
- ★ Wheelbarrows

Everything in
Industrial—Contracting—Municipal
EQUIPMENT & SUPPLIES

Well Machinery & Supply Co.
1629 MAIN ST. FORT WORTH



NATURAL GAS--Nature's Perfect Fuel is one of El Paso's Industrial Assets

Among the many advantages which El Paso has to offer as a future location for new industries is a virtually unlimited supply of efficient, low-cost natural gas. This progressive pipe-line company has always made it a rule to keep its production and transportation capacity ahead of the demand for gas. We will welcome specific inquiries.

El Paso Natural Gas Company

The Pipe Line Company

EL PASO, TEXAS



LAMESA, TEXAS

Ready For Business With Everything For Industry

To Industry, Lamesa and Dawson County announces its 899 square miles with \$20 million farm income-booming oil production—excellent transportation system—power and communication facilities—a population increase of 4000 in the last four years without assistance of wartime installation.

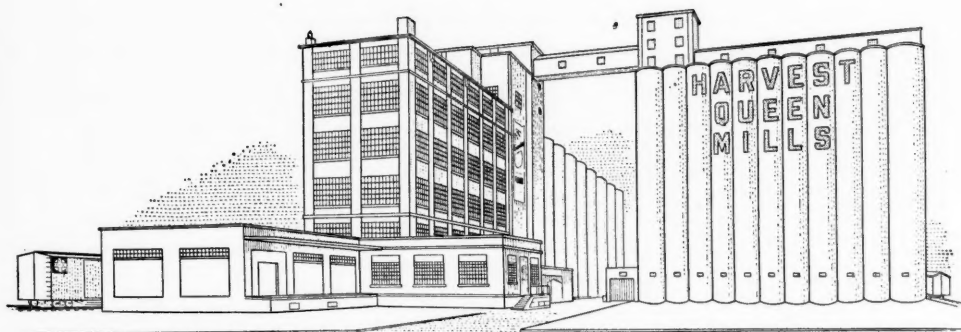
A YOUNG TOWN WITH A HEALTHY FUTURE

• *Agriculture—Oil—Transportation—Power—Manpower* •

Manufacturers of HIGH GRADE FLOUR and MILL PRODUCTS

SINCE 1910

CAPACITY 2,500 CWTs. DAILY—STORAGE CAPACITY 1,000,000 BUSHELS



HARVEST QUEEN MILL & ELEVATOR COMPANY

PLAINVIEW, TEXAS

1836-"G.T.T."



1946-"G.T.W."



"G.T.T." scrawled on cabin doors of the expanding East over a century ago gave notice to all that the owner had Gone to Texas. The movement was so widespread everyone in those days knew the meaning of the three initials, for even then the future of the Southwestern empire was foreseen.

Once again the exodus has begun, and men with vision are locating their industries in the new industrial Texas, hub of the industrial Southwest.

A nationally known magazine has recently reported, "For sheer industrial ecstasy Waco is perhaps the state's peak." Blessed with all the advantages of other points in Texas, Waco's strategic location in the very heart of Texas and in the exact center of population density is a principal determining factor in the decision of plant-site location for effective industrial decentralization. More and more industries have "G. T. W."—Gone to Waco.

*Address Inquiries to Industrial Department
Waco Chamber of Commerce — Waco, Texas*

WACO — The Hub of TEXAS



Planning to Build a Plant in Texas?

To those considering locating in America's new Industrial Empire we offer this Excellent Industrial Site in Waco.

● Located in an area of industrial plants including new \$5,000,000 General Tire & Rubber Co. plant . . . 60-acre tract—level terrain . . . Less than four miles from center of Waco . . . Abundance of artesian water at depth of 1,800 feet . . . Bordered by three trunk rail lines and adjacent to concrete highways your plant would be assured ample transportation facilities . . . Priced for immediate sale at \$27,500.

ADDRESS ALL INQUIRIES TO

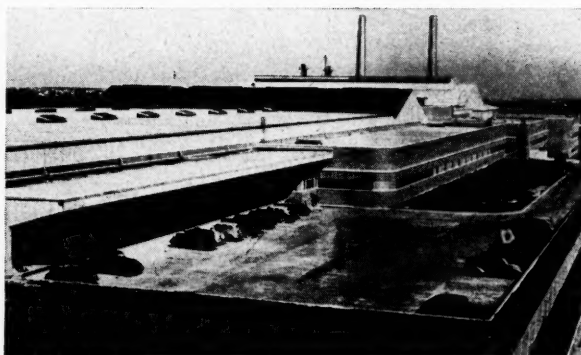
DAVIS R. GARLAND, Realtor
518 Franklin Ave., Waco, Texas

J. D. MOORE, Realtor
109-A So. 5th St., Waco, Texas

WACOANS MAKE GOOD GLASS

INTO every Duraglas container made at the Waco plant of Owens-Illinois Glass Company there goes all of the skill of the fine people who staff this industrial institution.

TRUE a goodly portion of the fabrication of glass containers is done by machinery, but the amazing equipment which is part of the glass container plant's operation, would be just so much metal and brick were it not for the alert and intelligent application of the people who make the plant a real living part of the community.



THE Waco plant is staffed essentially with Waco people. It has been built around a nucleus of highly skilled men from the company's other plants and together they have been molded into a great team.

OWENS-ILLINOIS GLASS COMPANY WACO, TEXAS

SEE FAIRBANKS-MORSE FIRST FOR DIESELS

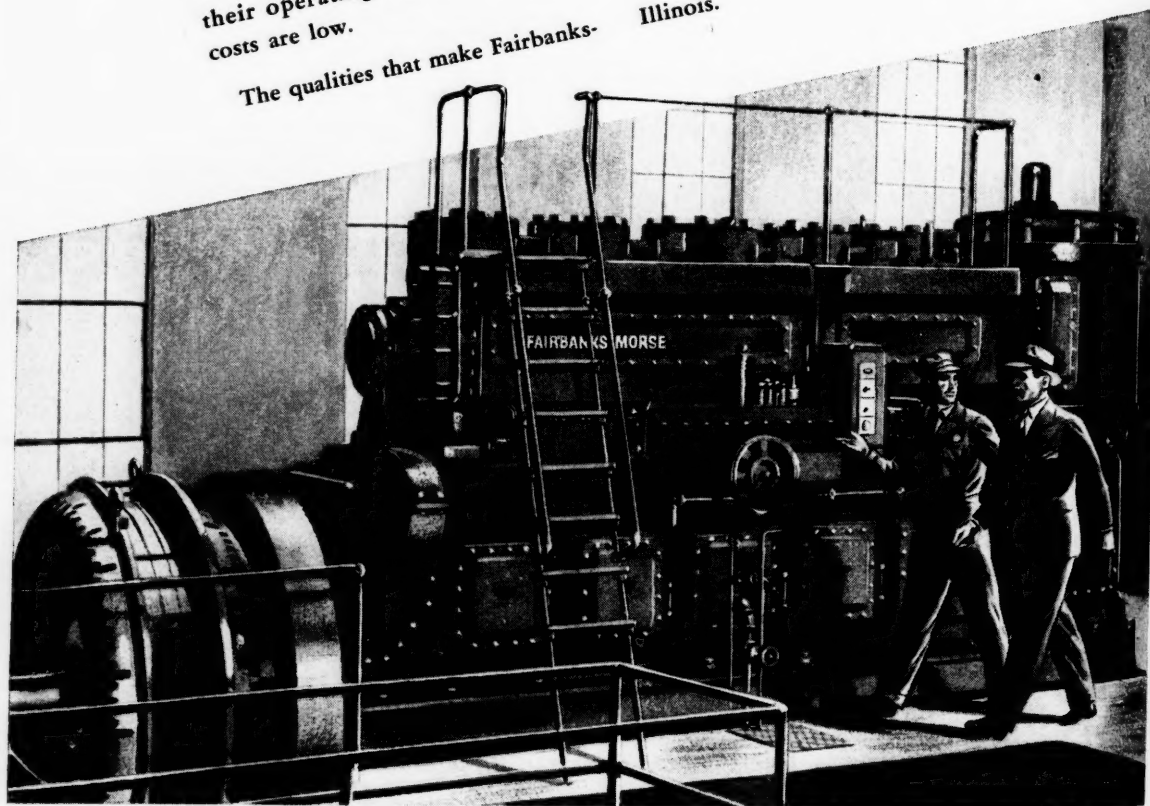
OPERATING records prove that you can rely on Fairbanks-Morse Diesels for dependable power, month in and month out... prove, too, that their operating and maintenance costs are low.

The qualities that make Fairbanks-

Morse Diesels so widely preferred are the result of long diesel manufacturing experience and research to make good performance even better.

Write for details today.

Fairbanks, Morse & Co., Chicago 5, Illinois.



Fairbanks-Morse

A name worth remembering



Diesel Locomotives • Diesel Engines
Scales • Motors • Pumps • Generators
Magneto • Stokers • Railroad Motor
Cars and Standpipes • Farm Equipment



"What Enriches the South Enriches the Nation"

FAIR OR FOUL?

For the past fourteen years the Federal Administration has found a highly efficacious way of evading due process of law in matters where courts were likely to rule adversely in cases concerning the New Deal's pet theories. It has set up kangaroo courts, under the guise of executive agencies, with defendants standing about as good a chance as they would have had before a court in Nazi Germany.

The two most notorious of these kangaroo court systems to date have been the National Labor Relations Board and the OPA. The mere fact that a man is called before one of these agencies is sufficient to class him as guilty in the eyes of those conducting hearings, and the only question remaining to be settled is how guilty is he, and how much to soak him.

The abuses of these hollow mockeries of a judicial system have been soft-pedaled. A few courageous newspapers and radio commentators manage to dig out the facts for themselves, but one of the most effective safeguards of the integrity of our judicial system — widespread publicity for all verdicts — is completely lacking. The Pontius Pilates of the New Deal prefer to lurk in shadow, and their victims lack the courage or the resources to fight back.

In spite of this the people are gradually becoming aware, and not a moment too soon, of the cruel perversion of justice that has been foisted upon them. For there is at present a law before Congress which would make the present extra-legal set-up look like an edition of Blackstone in comparison with what is now proposed.

We refer to the Fair Employment Practices Com-

mission Bill. This law purports to prevent discrimination by any employer with regard to race, color, or creed. This, in general, is a laudable objective, although the language of the bill could permit enforcement to be carried to such ridiculous extremes as, for example, forcing a Negro newspaper to hire a member of the Ku Klux Klan.

However, the real joker in the deck lies in the enforcement provisions of the bill. Will it be enforced through the courts? Certainly not. The courts might insist on a few of the outdated amenities of justice such as trial by jury, rules of evidence, and that foundation of Anglo-American law, the fact that a man is presumed innocent until he is proven guilty.

If this bill becomes law, the Commission itself will act as judge, jury and prosecutor, with all too often these three offices being wrapped up in the person of one man. It will try culprits when and where it chooses; a man who claims that he has been discriminated against in Atlanta may force a hearing in Fargo, North Dakota, if it suits his purposes and those of the Commission. The Commission will be authorized to paw over the books of any of the million and a half persons in our country who employ six or more other persons. In short, the Commission will be outside our judicial system.

The net effect of passage of this bill would be to nationalize American industry. Small wonder is it that every Communist, Socialist, labor leader, fellow traveler, or common garden variety radical is plumping in support of this bill. Should it pass, they will no longer have to console themselves with "Comes The Revolution." The revolution will have come.

Join TOOL OWNERS UNION Now

A NON-PROFIT, NON-STOCK CORPORATION

Do You Know That . . .

You are a tool owner if you have a savings bank account. Over 45 million people have such accounts and normally over 7% of bank deposits are invested and loaned by banks for "tools of production."

You are a tool owner if you have an ordinary life insurance policy; over 40 million people have such insurance and normally over 80% of insurance assets are invested in productive property, i.e., tools.

You are a tool owner if you are among the 8 million people who own stocks and bonds. For it is your money in these investments that goes into tools used by corporations—and you can easily lose that money unless you bargain for fair payments for the use of your tools.

You are a tool owner if you are among the 16 million "small business," professional men and farmers. Your savings are tied up in furniture, fixtures, trucks, equipment, barns and tractors you use to make a living.

You are a tool owner or a trustee of tools if you are a church pastor or officer of a college or school or even a charitable organization. For endowment and trust funds are only as good as the income earned by payments for the use of tools such funds have helped to buy. It is YOUR church, YOUR school, YOUR charity that suffers from strikes and inflation.

You are a tool owner if you are among the 13 million women who receive income from life insurance and other property—and it is YOUR living that depends on payments for the use of whatever tools that money is invested in.

Remember—there is some one who is a more powerful protector of productive property than any of us—and that is every one of us. Hence a Tool Owners Union to speak, work and act together gives us the most powerful force known to safeguard the nation's strength and the welfare of all of us.



NATIONAL HEADQUARTERS

MEMBERSHIP CLASSES IN TOOL OWNERS UNION

ANNUAL CONTRIBUTIONS FOR

Regular Members	\$ 1.00
Contributing Members	\$ 5.00
Supporting Members	\$ 10.00
Sustaining Members	\$ 50.00
Subscribing Members	\$100.00

NOTE: Be sure to make your application for membership on the coupon printed in this advertisement to assure prompt delivery of your membership card. No company or corporate memberships will be accepted.

Principles For Action

WHEREAS,—Tools of production are the very foundation of America's strength and material welfare; and

WHEREAS,—without these tools workers could produce barely enough to exist; and

WHEREAS,—these tools come into being, are renewed, and added to only through the thrift and self-denial of some fifty million individuals; and

WHEREAS,—the fundamental human right of bargaining belongs to the tool OWNERS (who provide the mechanical energy of production) quite as much as it belongs to the tool USERS (who provide the human energy of production); and

WHEREAS,—it has for many years been the persistent policy of government to violate this right and to discriminate against these fifty million unorganized tool owners in order to attract the political support of the leaders of organized tool users; and

WHEREAS,—this government policy has undermined the fundamental human right of the tool owners to receive payments for the use and renewal of the tools, has discouraged additions to the tools and has obstructed the growth of production to the detriment of all; therefore

Be It Resolved

1. That the fifty million tool owners organize for the purpose of regaining equality before the law, reasserting their fundamental human right to enjoy the fruits of their labor and self-denial, and reestablishing their position as the primary source of the workers' productivity and prosperity; and
2. that for the attainment of these objectives the organized tool owners engage in such action as is appropriate to the protection and advancement of their interests; and
3. that such action be applied to all political parties alike and that the fundamental soundness and fairness of the tool owners' position be impressed upon all candidates regardless of their political affiliations; and
4. that such action is in the primary interest of the nation, of the people in general, and of the workers in particular.

Tool Owners Will Do—

TOOL OWNERS UNION is setting itself to these tasks that you and I know must be done, and done now. To accomplish them, we must voice to Congress and public officials the combined opinion of 50 million thrifty people that outnumber any minority pressure group.

1. Numbers Count: TOOL OWNERS UNION will use full-page newspaper pages to enlist members from every Congressional District in the country.

2. Numbers Count: TOOL OWNERS UNION will foster district and local organizations throughout the country to meet any minority pressure group on its own ground.

3. Numbers Count: TOOL OWNERS UNION will record its members according to the Congressional District in which they vote—and let every Congressman and Senator know their strength.

4. Numbers Count: TOOL OWNERS UNION will appear before Congressional Committees in hearings on every proposed law that affects their interest—and see to it that every member of Congress knows that Tool Owners are watching his actions.

5. Numbers Count: TOOL OWNERS UNION will seek and obtain direct representation on Boards and Commissions and will back honest competent business management and loyal employees to assure free and fair bargaining for all.

6. Numbers Count: TOOL OWNERS UNION will ask all proposed candidates before a Congressional primary election to fill out a business-like application "for position as a public servant" and publish what EACH candidate says about himself. If a candidate refuses to answer the request, that fact will be published. In that way, we can encourage to run for public office more men of unquestioned COMPETENCE, CONSCIENCE and COURAGE.

These are the ways that we tool owners, acting together, can get action, and let us make no mistake, we can and will get EFFECTIVE action.

1802 Massachusetts Avenue, Lexington, Mass.

INDIVIDUAL MEMBERSHIP APPLICATION

PHILIP M. CLARK, Treasurer
TOOL OWNERS UNION
Lexington, 73, Mass.

MR2

I endorse our Tool Owners "Principles for Action" and herewith apply for membership in TOOL OWNERS UNION as (circle one) (a) Regular (b) Contributing (c) Supporting (d) Sustaining (e) Subscribing Member. My contribution for 1946 is enclosed. Please forward my Union card. I certify that I am an American citizen, and am not an elected or appointed Federal or State official, nor an officer or employee of any organization hostile to the purposes of TOOL OWNERS UNION.

Signed

Street

City

"There is someone more powerful than any one of us, and that is every one of us."

Printed and Published by MANUFACTURERS RECORD at its own expense.

MANUFACTURERS RECORD FOR

As Ye Sow—

The thinking people of this nation were greatly shocked to find that the Supreme Court, final safeguard of the rights of all of us, has sunk to the level of a backdrop for petty political and personal quarrels.

Close observers have long known that the Court was twisting constitutional law beyond all recognition to serve the ends of the Administration. This in itself is cause for grave alarm, but so long as we were able to believe that the justices were acting with the sincerity and dignity that befitted their position, we merely regretted that their interpretation of the law did not, in many cases, seem to fit in with the known facts and legal precedents. It is, of course, entirely possible for men to be deeply sincere and acting in complete accord with their honest convictions, and still be proven by history to have been utterly mistaken. Men who act thus hold our respect, even though we may never agree with them.

The press and radio have been rife with rumors that all was not as it should be on the highest bench in the land, but we knew that the peddlers of such rumors were, after all, dependent for support on digging up one sensation after another, and that columnists and commentators have been known, on a dull day, to hint at something spicy simply to fill space.

But the blow-off came. We were treated to the ignoble spectacle of a Supreme Court Justice, removed from the target of his wrath by the width of the Atlantic Ocean, casting aspersions on the integrity of a fellow justice through the medium of the public press. The performance was about as well calculated to inspire confidence as it would have been for a high-ranking general in the middle of the war, to have told his public relations men to spread the word that an equally high-ranking admiral was an incompetent crook.

As to the merits of the controversy, we do not know, nor are we here concerned about them. Justice Jackson may have been wholly correct in his allegations, or he may have been completely in the wrong.

The important thing is that he made them, and that Justice Black placed him in a position where he felt forced to make them. We cannot believe that this was the only possible course for either man. The Supreme Court, like any other body, has its dirty linen, as we were abruptly made aware. But after more than 150 years of dignified judicial decorum, during which many such minor disputes must have been settled in an orderly, proper manner, certainly this brush fire should not have been permitted to grow into a conflagration.

Back on the Leash

The righteous indignation of President Truman when he urged strong measures during the railway strike crisis subsided quickly. Since that time, the White House trend has been one of consistent backtracking from what was a firm, though not very constructive position.

Since the railway strike, the President not only has vetoed the Case Bill, which was in the nature of long-range legislation rather than a temporary stop-gap, but has also retreated considerably from the spirit of his original demands. His spokesmen have let it be widely known, for example, that he never really intended to draft labor. If such was the case, why did he ask for those powers?

This is not the first time that a politician has spoken out bravely, only to regret his words almost instantly. The memory of Senator Barkley, who lashed out at President Roosevelt's tax bill veto message, is still fresh. A few public soft words and private snaps of the whip were enough to bring Dear Alben back into line.

This time, however, it is not a president bringing one of his recalcitrant henchmen back into line. It is, instead, an all too clear case of a president being brought into line by a clique of labor leaders who plainly regarded him as *their* henchman.

Consider the facts. After Whitney threatened to spend \$47,000,000 to defeat Truman for the presidency in 1948, and other labor panders screeched in anger, the Chief Executive embarked on his appeasement policy. As soon as the Senate killed the draft provisions of the emergency labor legislation, the portion to which organized labor objected most violently, the President urged the adoption of this toothless temporary program, rather than the far-sighted Case Bill.

Once the Case Bill was passed by both houses of Congress, the President's motives seemed quite apparent. For nearly ten days the bill lay on his desk, while he told an anxious nation that he was "studying the bill." This looked like a stall. What was the President doing during the weeks the Senate was debating the bill? Was he trying to find excuses for a predetermined course, or reasons for deciding on that course. The text of the message, which showed a more than coincidental similarity to Phil Murray's letter urging a veto, looked like a frantic effort to convince the public that the Presidential thumb was turned down because the bill would have made a bad law. Even the anti-racketeering section, which at this writing is on the President's desk as a separate law, while approved in principle, was turned down because of the imagined injustices it might work. No attempt was made to explain how it was an injustice to prohibit union members from committing actual highway robbery.

Phil, Sidney and John can rest easy now.

The Dallas Southwest...

A GOLIATH WITH 13 BILLION DOLLARS IN ITS POCKETS

The big, aggressive Dallas Southwest is rapidly developing into the nation's brightest economic region. New plants and new businesses are moving to the Dallas Southwest in ever-increasing numbers. Established businesses are expanding and modernizing. The First National Bank in Dallas is prepared to cooperate in every way possible to help in the growth of this area... financing worthwhile business is *our* business. Whether you need money for expansion, reconversion or modernization—whether your business is large or small, we will be glad for you to come in and discuss your plans and requirements with us.



First National Bank
in Dallas

MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION



TEXAS





Texas, by far the largest state in the Union, is large in more ways than stretch of space. Few outside or even within the bounds of the Lone Star State fully realize the extent to which this western empire of the South has developed into a colossus of industrial productiveness.

It is contemplation of its rate of growth as well as its vast area that bring up mental visions of magnitude upon mere thought of Texas. Moreover it is this conception that best characterizes the state in all its aspects. It took magnitude of courage to get it started; magnitude of action to keep it going; and the results after centennial of progress reflect this magnitude.

Colorful from the beginning, when Spaniards and Frenchmen sought gold and silver and found instead rich soils, luxuriant grasslands and tarry seepings of untold petroleum wealth, the history of Texas presents a panorama of remarkable and unique occurrences. Twenty-eighth state to join the Union, it holds the distinction of being the only one to gain admission from the status of an independent nation. This was brought about by treaty. It became a state one hundred years ago, a little more than three hundred years after a Spanish expedition under Alonzo de Pineda made the first map of the Texas coastline.

From the time of that expedition until Texas became one of the United States, no less than six nations vied constantly to obtain control over the wide expanse and rich resources of the area. Spain fared best for many years in this rivalry, and for a long time the region was known as New Spain. It was during the earliest of those years under Spanish rule that Texas came by its name. As in the case of many states, the name is of Indian origin. Spanish explorers found in the region a federation of Indian tribes who called themselves "tehas" meaning friendly. The region at once became known as Tehas, or Texas.

When Mexico obtained its freedom from Spain in 1821, Texas became a province of the Mexican nation. Meantime, other important events had been taking place. It was in 1820 that groups of enterprising pioneers from the United States began to enter and colonize the region. First to arrive was Stephen F. Austin, often called "The Father of Texas," who brought with him several scores of followers. These North Americans, as they were called by the rulers of New Spain, were permitted to enter the country and take up land under authority granted by the Spanish government. During the decade that ensued, over 5,000 pioneers from the United States crossed the border to make their homes in Texas. Among them was Sam Houston, who later became the first president of the Texas Republic. Cotton farming was the chief occupation of the immigrants.

The question of civil liberties was soon injected into Texas-Mexican relations. The Mexican constitution was very complex, and in many ways objectionable to these men and women of Texas, who were accustomed to the individual freedom of the United States. Mexican law did not accord trial by jury, nor freedom of religion. It was inevitable that trouble should arise between the province and nation. In 1830, Mexican authorities issued a decree forbidding further immigration from the United States. This served to intensify the growing ill feeling, and in the following two years, sporadic battles occurred between Texas farmers and Mexican troops stationed in the province to enforce laws. Texans began to hold conventions, and the toast at meetings everywhere became "Liberty and Texas."

Active warfare broke out late in 1835. The Texas revolution against Mexico was on.



The Alamo.



Out of this conflict grew the shrine of Texas—the Alamo. So far as Texans are concerned, history dates both backward and forward from the Battle of the Alamo.

In that epic struggle, fought to prevent overwhelming numbers of Mexican troops under General Antonio Lopez de Santa Anna from entering the main territory of the province, between 185 and 200 fighting men gave their lives, to a man, for Texas. It is well known that they could have escaped, had they willed, by retreating from their fortress, a mission chapel surrounded by a walled enclosure. They chose instead to stay, to fight and to die.

In a message to his countrymen, preceding the battle, the commander of the little garrison, William B. Travis, proclaimed, "Fellow citizens and compatriots: I am besieged by a thousand or more Mexicans under Santa Anna. I have sustained a continual bombardment and cannonade for 24 hours and have not lost a man. The enemy has demanded a surrender, otherwise the garrison are to be put to the sword if the fort is taken. I have answered the demand with a cannon shot and our flag still waves proudly from the walls. I shall never surrender or retreat . . . I am determined to sustain myself as long as possible and die like a soldier who never forgets what is due his own honor and that of his country. Victory or Death!"

Travis remained firm to his resolution and his companions, James Bowie, Davy Crockett, James B. Bonham and over 180 other heroes died with him. For the people of Texas their gallant stand and sacrifice meant more than mere acts of heroism. Shining through the glory of its heroic valor, the Alamo unfolded to them a magnificent demonstration of devotion to the principles of human liberty. It truthfully may be said that with the fall of the Alamo on March 6, 1836, Texas was lost forever to Mexico, for thereafter Texans were inspired to a point where the final verdict was inevitable.

Today the Alamo still stands, in actuality as well as in Texan hearts. The little gray chapel, the Mission of the Alamo, in which its defenders made their historic stand, still with its courtyard and ivy-covered walls, rests in the shadow of a San Antonio skyscraper—a monument for Texans to see and remember.

While the Battle of the Alamo was in progress, Texas was writing its Declaration of Independence. On March 2, 1836, it was adopted at a convention held in the town of Washington on the banks of the Brazos River. On March 17, a constitution was framed and adopted.

The Republic of Texas had come into being.

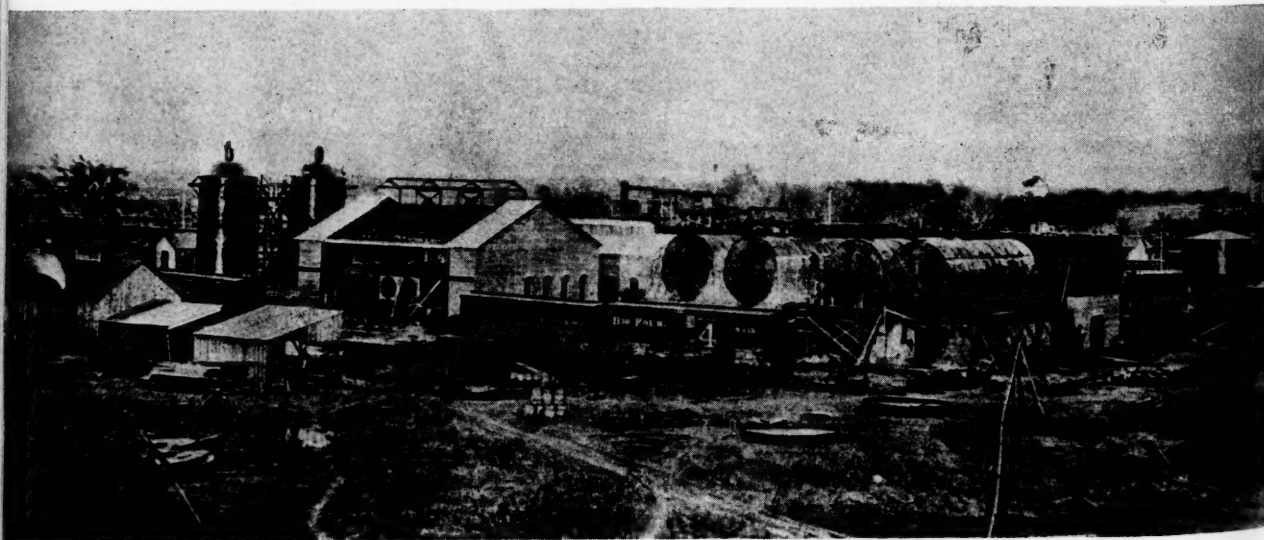
Its flag was red, white and blue, with a single star which was to become the symbol of its statehood designation—the Lone Star State.

Independence of the new republic became a reality with the rout of Santa Anna's army on the following 20th of April by a force of Texans led by Sam Houston. Texans went into that battle shouting, "Remember the Alamo," and their claim to righteous vengeance was not to be denied. The Mexican army found their fury irresistible. Santa Anna fell prisoner, and those of his men who were not slaughtered fled in disorder.

Thereafter, for ten years, Texas existed, undisturbed, as an independent nation, although it sought annexation to the United States during the first of those years. Politics in the United States and diplomatic relations with Mexico held back this action for a decade. Finally, overwhelming sentiment among the people of the United States and the fear that England or France might annex the region brought favorable action by Congress in 1845. Texas was given annexation terms and accepted these in time to become a state within that same year.

By the treaty of annexation, it came into the Union directly as a state without passing through the usual

First Successful Oil Refinery in Texas. Built by J. S. Cullinan, the Pioneer Plant was Fired up on Christmas Day, 1898.



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Above—Spindletop Monument, Erected on the Fortieth Anniversary of the Famous Gusher.

Right—The Anthony Lucas Well Blowing in at Spindletop in 1901.

territorial status. It also retained title to its public lands, another condition which was contrary to traditional practice, which called for ceding them to the federal government. The treaty further provided that the new state could, if it desired, divide itself into as many as five states—four others than the original. On December 29, 1845, the Stars and Stripes replaced the Lone Star over the State Capitol at Austin.

Though it has disregarded its treaty right to split its lone star into five, its decision cannot have been for lack of land. Were five states to be carved from its expanse, each would be as large as Arkansas with its 52,725 square miles. Texas, as it stands, covers 263,644 square miles. If every man, woman and child in the world were to go there, each could be provided with a plot of land about equal to an ordinary city lot. It comprises one-twelfth of the area of the United States. It is a third again larger than France and 83,000 square miles larger than the Hitler Germany that was. Russia is the only country in Europe larger. Texas has the fourth longest coastline among the



Texas longhorns. Their horns sometimes measure 8½ feet from tip to tip.



states, and the greatest frontage on a foreign nation.

Its borders extend from the semi-tropics of the Rio Grande River, northward into the reaches of the mid-west grain fields, a distance of over 800 miles. From east to west it stretches nearly as far—775 miles from Louisiana in the deep South to New Mexico in the arid southwest. It is thus, at once, a land of citrus and palms, of grain waving on willowy stems or heading ears on sturdy stalks, of rice, cotton and cane, of grassland and cactus. No other state knows such diversity.

Rising from the sea level coast of the Gulf of Mexico, its surface extends northward and westward in somewhat stairstep fashion to reach an altitude of over 4,000 feet in the High Plains of the Panhandle section. Between the steps the surface is comparatively level. Two of the steps stand out markedly as escarpments. The most southeasterly of these extends roughly from Del Rio eastward, with San Antonio in its line of direction, and thence northeast. It is known as the Balcones escarpment. The other, the Cap Rock escarpment, marks the eastern edge of the High Plains section in the western part of the state. Its line of direction is almost due north and south. It is rugged and steep, picturesquely lined with caliche-capped bluffs. This step is the dividing line between the High Plains of the west and the rolling Red Beds plains which extend southward into Texas from western Oklahoma. In the roughly quadrangular, most westerly part of the state, the Trans-Pecos country, is found the most rugged portion. There, the valley plains are separated by mountain ranges, some of which attain altitudes of 8,000 feet.

Ranging from southeast to northwest, the surface of the state falls into three general plains regions—the Coastal Plains, the central Denuded Region together with the Edwards Plateau, and the High

Plains. As between the three sections there is considerable variation of climate. The cities and towns of the south coastal plains are popular as winter resorts, with freezing weather almost unknown. Gulf breezes temper the warmth of summer. Rainfall is bountiful in the northern part of this section, ranging from 40 inches upward per annum. At the other extreme, in the High Plains, mean annual temperature in the highest part of this region is 54 degrees. Rainfall varies from 20 to 30 inches. Zero weather is sometimes experienced in winter. The summer days are sometimes hot but the nights are prevailingly cool. In the broad central area between the two extremes, gradation of temperature and precipitation is strikingly uniform. Mean annual temperature for this section runs about as it does for the state as a whole, between 75 and 86 degrees, with annual rainfall around 30 inches.

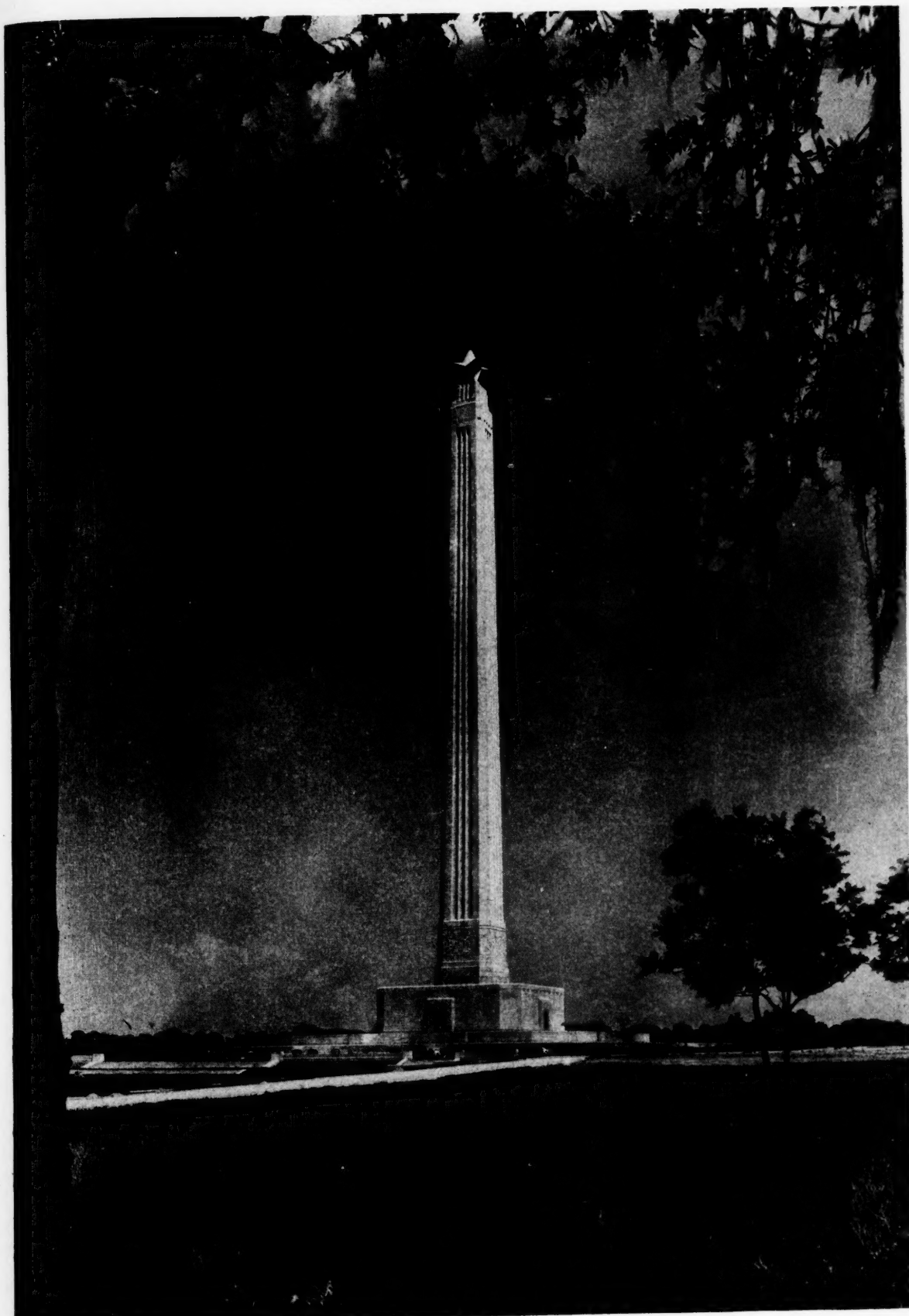
All three sections are supplied with rivers and streams, the eastern portions bountifully so; and these, besides enhancing the picturesqueness of the general layout, make important contribution to the welfare of the economy. Most of the rivers rise within the state. Water to the extent of over forty million acre-feet is discharged by these waterways into the Gulf of Mexico each year—this after more than eight hundred thousand acres of land have been irrigated by their waters.

Mammoth dams and lakes have been constructed along their courses, conserving water for vital purposes, controlling floods when such may occur and generating power for industrial uses. These rivers are valuable natural resources. Most of them are large. The Rio Grande, the Colorado, (not to be confused with the Colorado River of Grand Canyon fame), the Red River, Neches, Canadian, Trinity, Brazos and Guadalupe are all heavily marked on the maps. The Pecos and Devil's River, while less pretentious in their own right, contribute substantially to the flow of the Rio Grande.

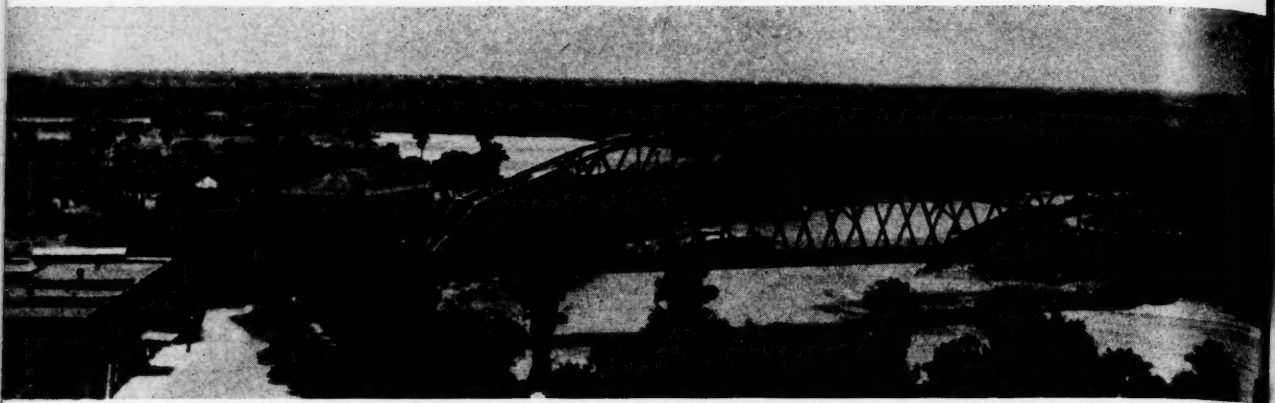
To supplement its surface streams, the state is blessed with a plentiful and valuable resource in its underground waters. Nearly three-fourths of the population enjoys the pure water of wells and springs for drinking purposes. In addition, many acres of land are irrigated by water obtained from wells. Recognizing the importance of this great natural resource, Texans have established an intensive water conservation program which is administered by an official agency, the State Board of Water Engineers, which is closely associated with the Water-Supply Division of the U. S. Government Service.

Topography, climate and water supply afford Texas everything that is required for a great agricultural state, and it is only natural that farming and stockraising should have been the backbone of its early economy. Before the Civil War, thousands and thousands of pioneers flocked to its plains and prairies to become plantation owners or ranchmen. Like the rest of the South, Texas was hit hard by the war between the states. But it was not hit as hard as some of its sister states of the Confederacy. One reason for this was its vast accumulation of live stock. While the end of the war found many of its planta-

The 570-foot San Jacinto Monument.



JULY NINETEEN FORTY-SIX



Above—International Bridge—Texas at one end, Mexico at the other.

Below—Big Bend National Park, Newest Federal Recreational Area in the West.





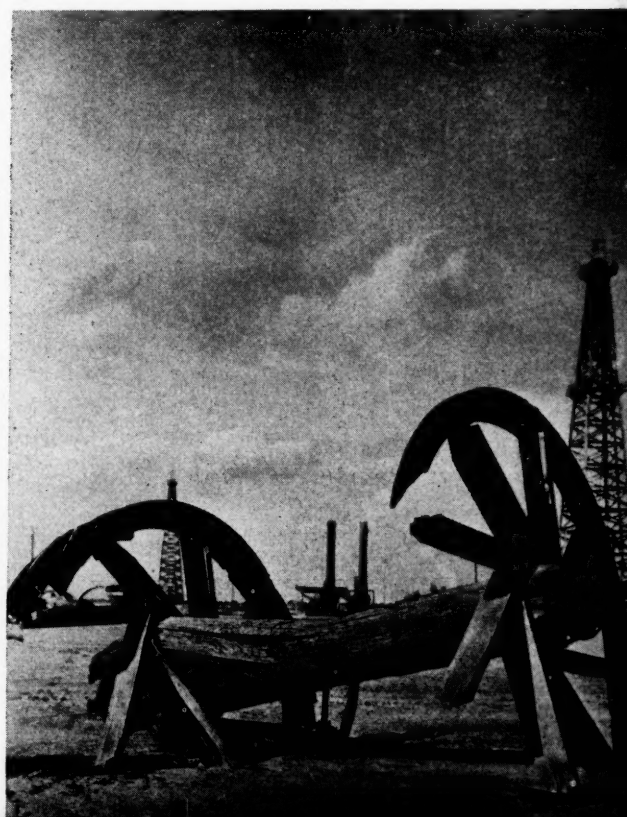
Above—The Concho, One of Many Texas Rivers.

tions overrun or neglected, millions of head of cattle still roamed its grazing lands as a buffer to postwar depression and a nucleus for reconstruction and recovery. By 1900, the state was well back on its agricultural feet, and ready to launch forth into impressive industrial development.

Income from all sources in Texas in 1943, last year for which absolute figures are available, reached the huge amount of \$5,600,000,000. Receipts from productivity in both 1944 and 1945 are recognized to have exceeded even this large sum, but it appears unlikely that exact figures for these years will be published soon, inasmuch as both were war years with many complexities involved in computing industrial activity. Evidence of the phenomenal rate of growth that is taking place, however, can be seen in comparison of 1943 income with that of former years. Oil and gas produced \$344,269,000 in 1929, \$261,991,000 in 1932, \$498,123,000 in 1939 and \$738,000,000 in 1943; minerals, exclusive of petroleum, brought in \$83,037,000 in 1929; \$40,401,000 in 1932, \$75,218,000 in 1939 and \$135,000,000 in 1943; receipts from agricultural products totaled \$665,759,000 in 1929, \$285,979,000 in 1932, \$523,385,000 in 1939 and \$1,197,000,000 in 1943; and value was added by manufacture in the amount of \$460,307,000 in 1929, \$254,974,000 in 1932, \$453,105,000 in 1939 and \$650,000,000 in 1943.

Keeping pace with industrial progress, population also has had an outstanding rate of growth. Starting with only a few hundred persons in 1820, when Texas history is recorded to have begun in earnest, population had reached 212,600 by 1850. Ten years later, at

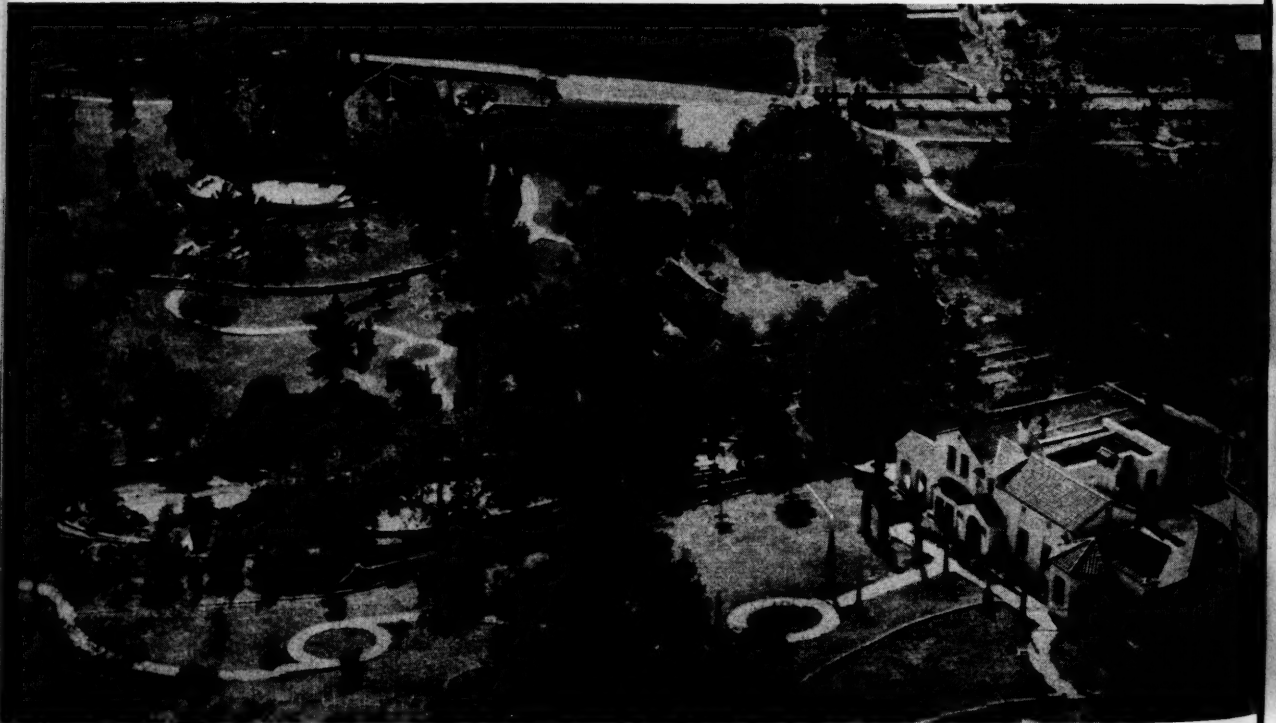
Below—An Old Bull Wheel of Cable Drilling Days.

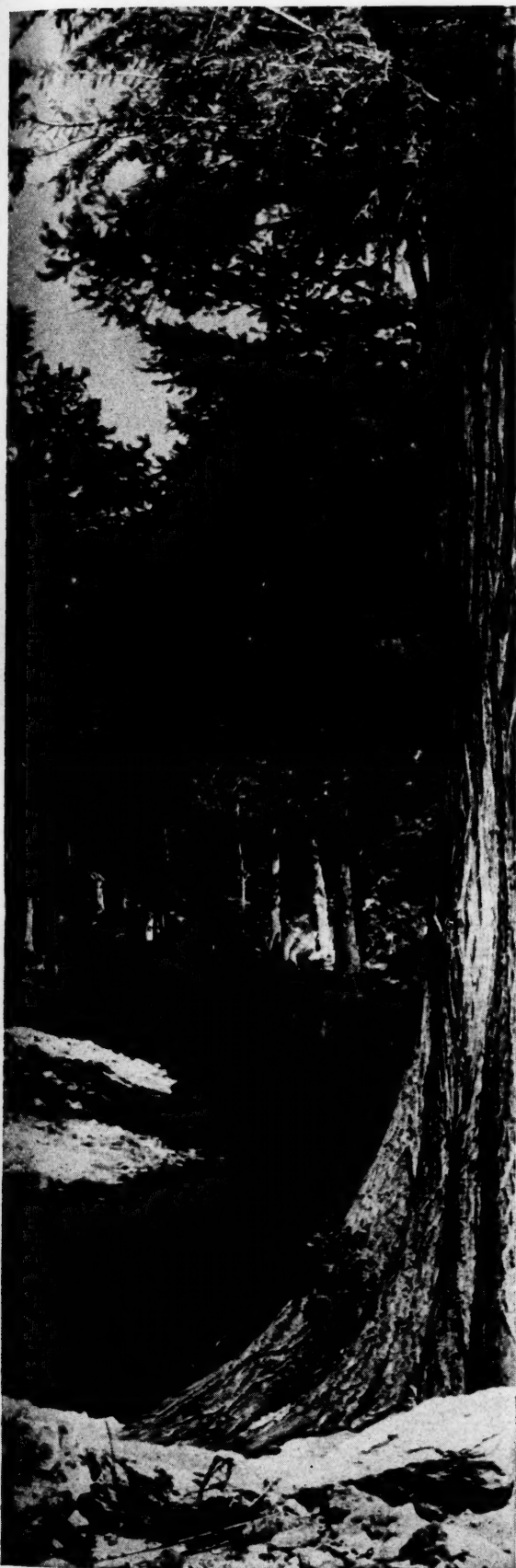




Above—Derricks on Texas Oil Fields Silhouetted Against the Sky.

Below—Huge Ranches and Palatial Estates are Part of the Texas Scene.





JULY NINETEEN FORTY-SIX



Mission de la Espada near San Antonio.

the beginning of the Civil War, there were 604,200 people in the state. Despite the ravages of war, the number jumped to 818,500 during the 1860s, and by 1880, census of 1,591,700 was recorded. Gaining thereafter at the rate of almost a million each decade, the census registered 6,876,248 persons in 1944. A breakdown as to race shows that the 1940 population was made up of 5,253,157 native-born white, 234,388 foreign-born white, 924,391 negro and 2,888 of other races.

Since 1900 railroad mileage increased rapidly. Good roads and irrigation facilities were installed. Oil and gas were tapped and put into production. Ports and harbors were developed. Production of industrial power was soon to become an important enterprise. Commercial fishing blossomed into a thriving industry. Manufacturing plants began to spring up throughout the state. Agriculture continued to grow and improve.

Today, among other things, Texas has the largest ranch in the land, larger than the whole state of Delaware; the front door of the ranchhouse is 18 miles from the highway gate. It has some of the deepest and most productive oil wells. It has the largest helium plant in the world. It leads all states in production of cattle, sheep, horses, goats and mules. More lines of railway were laid in Texas since 1927 than in all of the rest of the nation combined. It alternates with New York for lead in the value of commodities for export. Education, science and art are receiving intensified attention.

Every type of progress known to the nation can be emphasized in this year of 1946 as Texans gather at scheduled intervals in the chief population centers of the state to observe their Centennial of Statehood.

Left—Texas woodland scene.



Palm Bordered Rio Grande Valley Highway.

Since the official procedures by which the Republic of Texas became one of the states of the Union were extended from 1845 over into 1846, these Centennial celebrations were begun in 1945 and continued into the current year. Preparations for the program were made as early as 1941, when the legislature in that year provided for a Centennial of Statehood Commission. The entry of the United States into war and the serious problems that were inevitably to follow caused the Commission to abandon plans for glamorous events. Instead, that body issued as its belief:

"It is our thought that, if Texas attempts to execute a planned celebration in honor of the 100th anniversary of statehood, then this observance should take the form of something very practical."

The statewide exposition outlined by the Commission and observed by the state became a movement on behalf of improved conditions in all sections of economy. While formal observance will last only through 1946, the movement is planned to be the beginning of a program of development to extend throughout the second hundred years of statehood.

Throughout all its existence, both as a struggling republic and a fast growing state, Texas has remained typically Texan.

Probably the most remarkable attribute of the region and its people is the ability to absorb the good of the new without giving up the best of the old. The real Texas cowboy has by no means become extinct. He still actually exists on many Texas ranches. In less realistic appearance; perhaps, but no less natural, he may be expected at almost any time to appear during heated debate on the floors of Congress or to spring to life on a field of battle. Boots, spurs and cowboy hat may be absent on these occasions, but the

traditional Texas humor, the virility and sense of individual freedom will be unmistakably present.

Much of this maintenance of early day character can be traced to the social life of the state which remains typically Texan. Texans have developed a way of life that is all their own. In it are combined the traditions of the South and the color of the West. Throughout the state, hospitality reigns in traditional Southern fashion, and social standing is built upon time honored customs and observances. From the South come the stately balls; equally popular and equally widespread are the barbecues and rodeos so reminiscent of early western life.

Texas Quadrille.



MANUFACTURING



Aerial View of the Hoskins Mound Sulphur Plant.

In no field of development has the growth of Texas economy been more outstanding than in its expansion of manufacturing enterprise. In comparison with that of the country as a whole, this expansion has been truly phenomenal.

Between the beginning of the century and the outbreak of World War II, the value of products manufactured in Texas grew 1,647 per cent. During the same period the nation as a whole was increasing its manufactured output 480 per cent. Value of Texas manufactures in 1899 was \$92,894,433. By 1939 their value had jumped to \$1,530,220,676.

It appears evident from available facts that when government statistics, suspended by the war, are brought up to date, it will be found that even that sensational growth has been accelerated. Reliable sources of evidence indicate that the \$1.5 billion of 1939 became not less than \$3 billion, and very likely in the neighborhood of \$4 billion, in 1945.

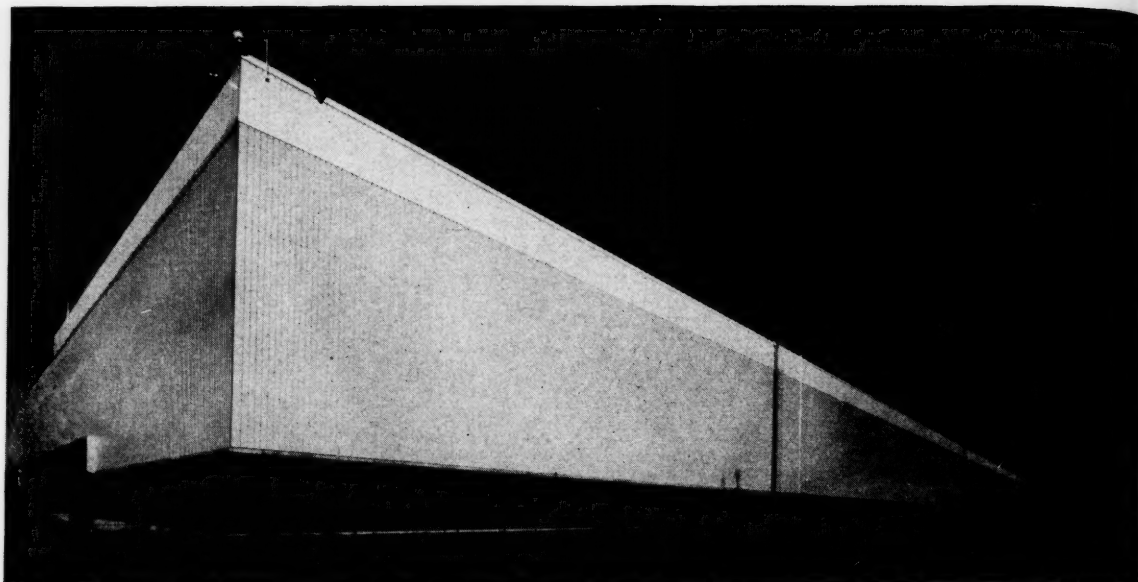
Electric energy required by industrial establishments was up from 2,037,214,000 kilowatt hours in 1939 to 5,821,313,000 in 1945. Industrial employment increased from 178,000 workers in 1939 to a peak of 443,000 in November, 1943. After V-J Day inevitable temporary layoffs brought declines in employment that tapered off at 294,000 workers in February, 1946. This decrease is directly traceable to war contract

cutbacks, plant reconversion and strikes.

Employment turned definitely upward in March when a report released by the Bureau of Business Research of The University of Texas showed employment in all manufacturing enterprises to have been 296,900. The upward trend is confirmed by April reports. In that month the aggregate number of wage earners employed by 1,857 reporting firms rose 2.9 per cent. The reversal of the downward movement since the end of the war indicates that employment has recovered from the impact of reconversion and is on its way back to full production.

This indication is strengthened by data contained in the following excerpts taken from *Texas Business Review*, published monthly by the Bureau of Business Research of the University of Texas and found to be consistently accurate and conservative in its reports and forecasts:

September, 1945: "Interviews with firm members and with organizations representing all classes of business lead one to conclude that time required for the successive steps in reconversion range from a few days to a few weeks. . . . A huge backlog of orders for postwar products is reported by all firms interviewed. The experience gained during the war, together with the use of superior equipment developed, is expected to result in improved models, in new products and

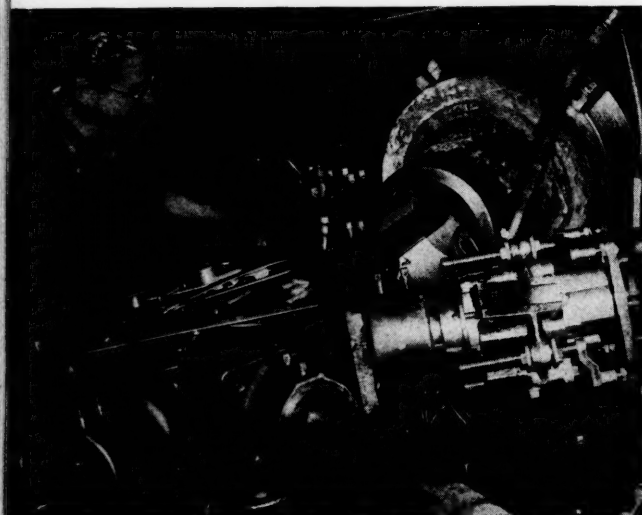


Above—Consolidated Vultee Plane Plant.

Below—A Dallas Cotton Mill.



Below—Lathe Operation.



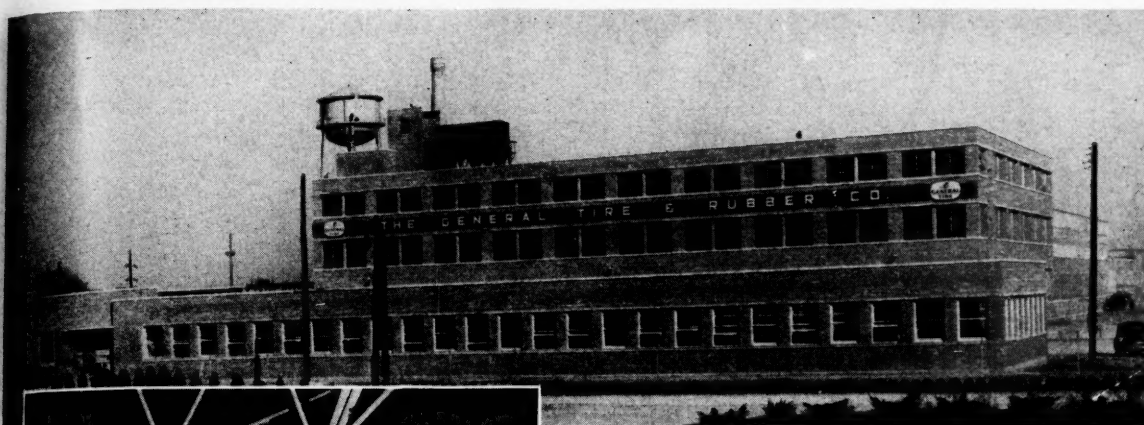
greater efficiency of production along many lines."

November, 1945: "According to reports in the State Department, 137 new corporations were chartered in Texas during October which compares with 83 in September and 57 during October, 1944. Capitalization of these corporations totaled \$2,942,000 compared with \$1,679,000 during September and \$886,000 during October a year ago."

April, 1946: "The number of new corporation charters issued in March totaled 349, compared with 81 in March, 1945. The number of manufacturing charters more than doubled the number of the preceding month."

Business optimism is at a high pitch throughout the state and current reports indicate that most reconversion problems have been fully met and surmounted.

In any survey that may be made of recent Texas



Above—Tire and Rubber Plant, Waco.
Left—Interior of a Fort Worth Steel Plant.



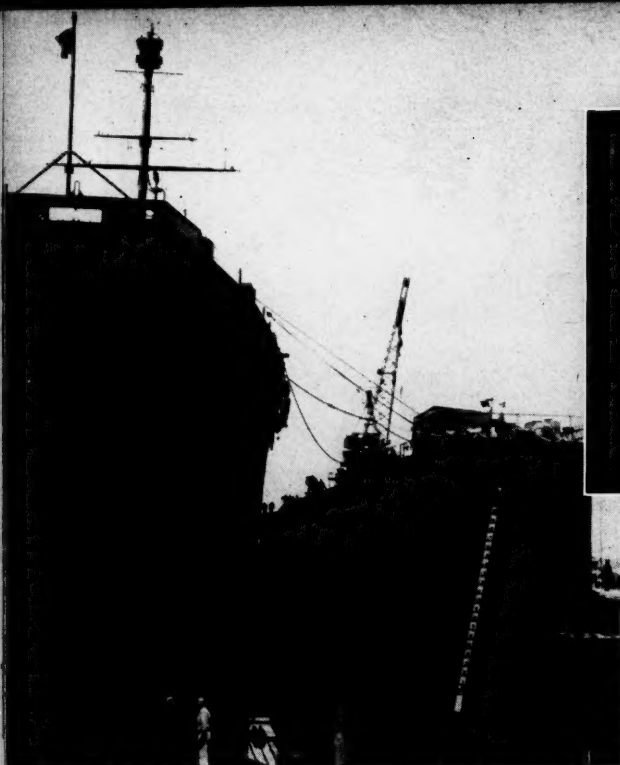
industrial progress, the magnitude of the new facilities that have been installed will stand out strikingly. While established prewar factories have made notable gains in plant expansion and output, it has been the establishment of enterprise in relatively new fields that has contributed most to the excellent prospects that lie in the offing. Among such new fields, the manufacture of chemicals and synthetics appears especially important.

Considering the size of Texas, it is inevitable that space limitations should preclude the mention of all establishments that are noteworthy, but sufficient instances can be cited to prove beyond doubt that tremendous strides have been made in these fields. It is only necessary to point to the following plants, all established during the period of the late war:

Two large factories turning out styrene, their cost \$7 million and \$19.7 million; an hydrous hydrofluoric plant, \$1 million; a plant producing phenothiazine, \$2.5 million; serum albumen, \$125,000; methanol acetic acid and acetic anhydride, \$11 million; anhydrous ammonia and aviation gasoline ingredients, \$25 million; at least one acetylene plant reportedly turning out 900,000 cubic feet a month; five toluene plants costing from \$3 million to \$12 million each; several oxygen plants, \$50,000 to \$475,000; an alkali factory, first unit of which was set up in 1934, but with wartime expansions bringing its total cost to \$10 million;

A Fort Worth Mill and Elevator Plant.

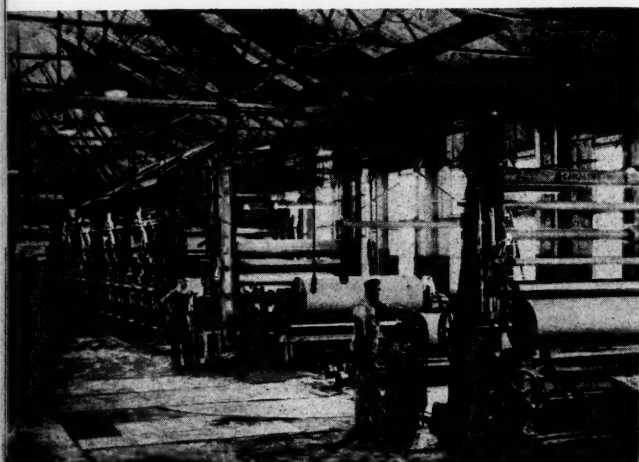




Above—Packing Grapefruit in Rio Grande Valley.

Left (Upper)—A 11,500-ton Floating Dock which Can Accommodate Vessels up to 564 feet.

Left (Lower)—Paper Mill.

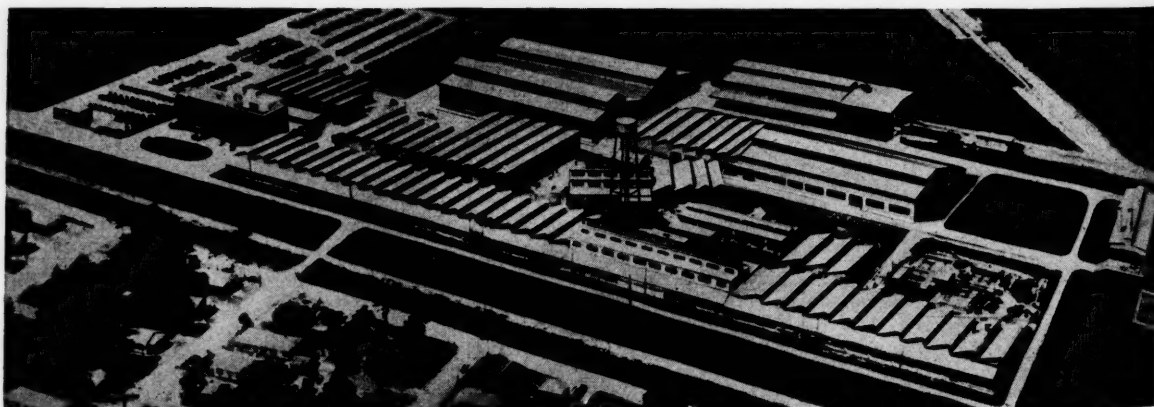


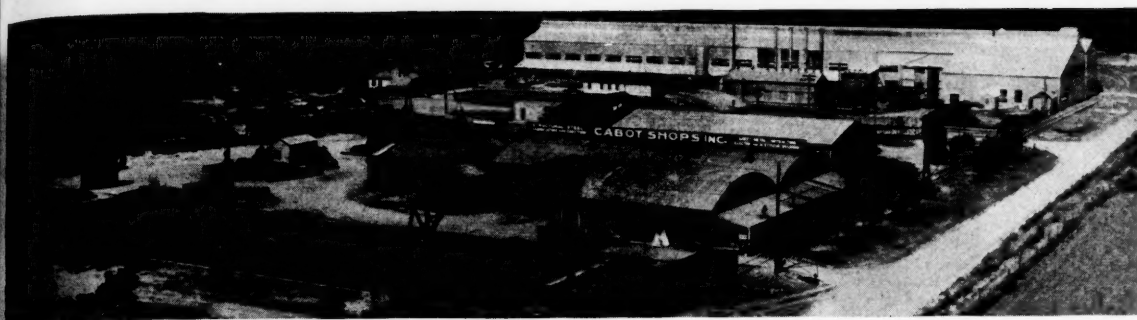
a \$3,757,000 plant to manufacture a catalyst used in "fluid" cracking processes.

Twelve synthetic rubber plants were built—six of the butadiene type, five copolymer and one butyl. The six cost \$53 million, \$34 million, \$32 million, \$19 million, \$4 million and \$1.8 million; the five, \$16 million, \$16 million, \$13.2 million, \$8.5 million and \$7.7 million; the butyl plant, \$25 million. While these plants are not currently in full production, the wartime rubber program in Texas, with its annual capacity of 285,000 tons of synthetic rubber, represents about 40 per cent of the entire program for the United States.

Other new plants installed during the past five years include a magnesium plant running well over \$100 million in cost; aluminum chloride plant, \$836,000; a second magnesium plant, \$15 million; soap factory making glycerine as a by-product, \$5 million; two zinc refining plants which also produce cadmium; a large tin smelter costing \$6,650,000 and designed to use concentrates imported from Bolivia in sufficient supply to turn out 96,000 tons of pig tin a year; two glass bottle plants, one costing around \$200,000, the

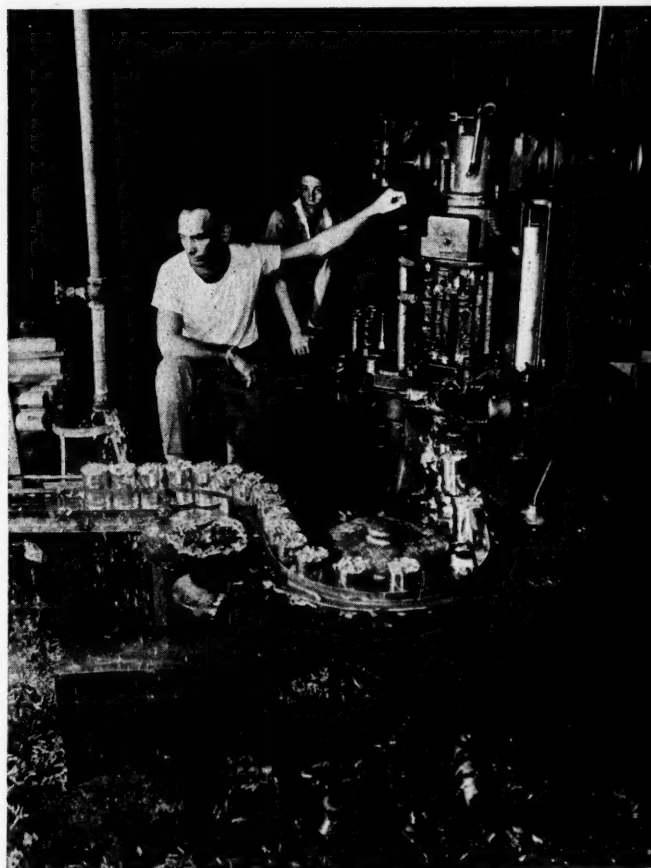
Below—During the War this Oil Field Equipment Plant Made Tank Transmissions.





Above—Steel Fabrication Plant at Pampa.

Below—Canning Plant at Orange.



Right—A Texas Brick Plant.

other, nearly \$1,000,000; two huge pulp and paper mills, the total cost of each being around \$10 million.

In the field of expanded enterprise, cycling plants have had noteworthy growth. Cycling, frequently referred to as recycling, is defined by the industry as being the primary recovery operation by which condensate or distillate is separated from high pressure gas, with the residue or dry gas then being compressed and returned to its reservoir. Cycling has become important in furnishing raw materials for synthetic rubber and high octane gasoline. It is estimated that total investment in Texas cycling plants runs around \$50 million.

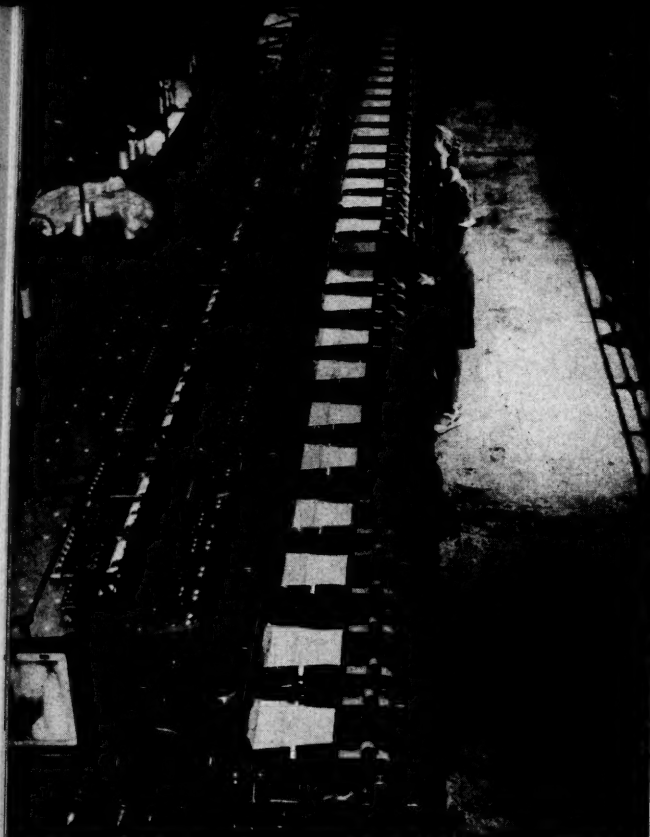
The tire industry has been expanded by the addition of a new plant costing in excess of \$4 million.

The production of carbon black from natural gas has been stepped up appreciably through the addition of new plants and expansion of those already in existence. While this is an old industry, dating back as far as 1872, with its earlier uses confined to lamp-black, inks and similar manufactures, its value in synthetic rubber manufacture brought it into new prominence during the early years of the war. In 1940, 88 per cent of the output was taken by rubber concerns, principally for use in tire making. In that year Texas produced 479,896,000 pounds of the 568,792,000 pounds turned out in the United States.

Steel production, which registered steady progress in Texas during its half century of industrial growth, was given a tremendous boost in the last few years. Established iron and steel plants substantially increased their production and important new facilities were installed. Among these latter were a pig iron producing plant installed at a cost of \$21 million and partial construction of a \$2,500,000 plant to produce charcoal pig iron and chemicals from hardwoods. Work on this plant was temporarily halted at the cessation of hostilities.

Among prewar manufacturing operations, oil refining has long dominated Texas industry. The current value of all refined products is slightly more than \$1,000,000,000 annually. At the end of 1943 there were 95 Texas refineries in operation, running crude oil at the rate of 1,300,000 barrels per day. Texas refining is almost one-third of the United States total.

Refining equipment was improved during the war by the addition of new catalytic cracking, isomerization, and alkylation units. While it is likely that the industry would normally have worked into these



Textile Production in Texas.

changes over a period of time, the urgency created by the war had the effect of expanding refining processes from experimental to full-scale status almost overnight. New equipment installed for production of aviation gasoline will furnish the means for raising the octane number of motor fuel in peacetime usage.

Although the war retarded expansion in most industries except those vital for victory, Texas manufacturing is not lacking in variety. It was well diversified before the war began. Despite wartime impediments facilities and output of non-vital plants have fully maintained the status they held in 1939. In that year 41 Texas textile mills turned out products valued at \$83,647,897. Two tobacco factories produced \$3,362,365; prewar chemicals were produced in 346 establishments to the amount of \$78,255,203; iron and steel and their products, 151 plants, \$39,037,302; apparel and other fabric materials of similar nature, 216 plants, \$39,815,012; furniture and finished lumber products, 251 plants, \$26,716,794; paper and allied products, 33 plants, \$10,704,432; automobiles and automobile equipment, 27 plants, \$45,391,930; transportation equipment, 14 plants, \$5,209,288; electrical machinery, 23 plants, \$11,087,870; food and kindred products, 2,092 plants, \$343,456,298; nonferrous metals and their products, 79 plants, \$23,804,261; machinery other than electrical, 342 plants, \$59,355,021; lumber and wood products, 398 plants, \$38,208,696; printing and publishing, 866 plants, \$47,910,621; stone, clay and glass products, 228 plants, \$29,976,637; leather and its products, 33 plants, \$9,221,726.

Value amounting to \$453,105,423 was added to raw materials produced in the state by these establishments, a vast number of which fall within the classification of fabricating or finishing plants. Texas industrialists are looking now into a vista of expanding facilities for fabrication and finishing. Natural resources exist in abundance. Low cost fuel and power are ready at hand. Transportation facilities are excellent. The war has presented huge establishments for reducing raw materials to semi-processed condition. The only remaining step towards reaping the full benefit of the state's natural wealth is fuller development of facilities to transform basic materials into useful articles.

Among current plans reported are those looking toward more tire and rubber article plants, plastics fabricating shops, additional machinery and metal goods factories, clothing factories including those for boots and shoes, and food packaging plants.

In the last-named field, that of processing, preserving and packaging food, unusual opportunity is recognized. Texas is an ideal location for canning, preserving and freezing plants. The state's wide variety and vast quantities of livestock, marine and agricultural products embrace nearly every food within the national borders. Grains, vegetables, fruits, meat and fish are still shipped in tremendous volume to other states for processing. The great supply of these, together with new developments in containers, methods of preserving, and commercial quick-freezing opens up almost unlimited opportunity for Texas capital, which is now abundant.

The sea-food industry alone presents vast possibilities. Up to now it has been developed to only a limited extent. The field is wide open for enterprise in smoking, drying, salting and pickling fish, and in canning and freezing shrimp and oysters. Fish constitute a basic material for pet feed and fertilizer and vitamins. The variety of species and their ready availability off the Gulf shores of Texas offer opportunities unexcelled in any other coastal region of the nation. Plans based on developing the marine products of the state appear especially bright.

Whether the development continues in the direction indicated by currently reported plans, or in some other, it appears evident that noteworthy expansion may be expected in the years ahead. Such a prediction is in line with a trend which has become intensified with the passage of years and is also in line with convictions held by Texans from the beginning. Almost as soon as he had reached Texas soil, Stephen F. Austin wrote of the boundless resources and the need of manufacturing industries to convert them to finished products.

In keeping with plans for swift industrial expansion, the construction industry has gotten off to an auspicious start. This activity is sharply reflected in the increased production of cement during the latter months of 1945. It is estimated that activity in the months following V-J Day raised cement production in 1945 to a level 25 per cent higher than that of 1944. Shortages of building materials and bottlenecks in their distribution appear now the only re-

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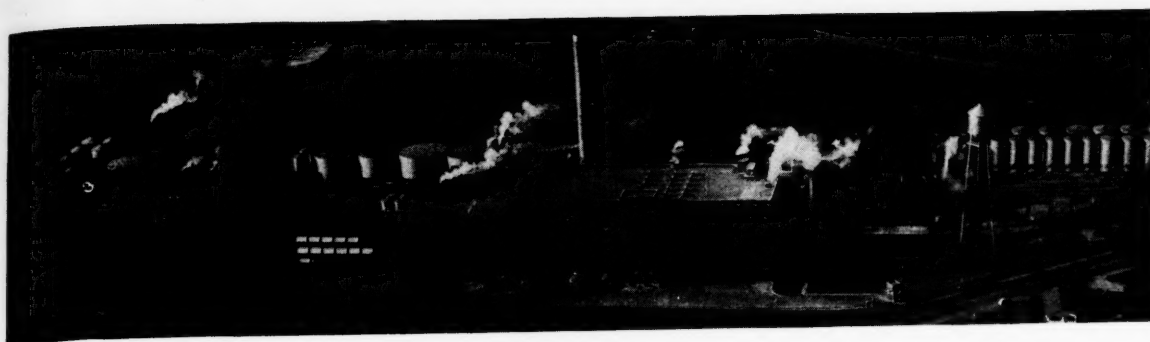
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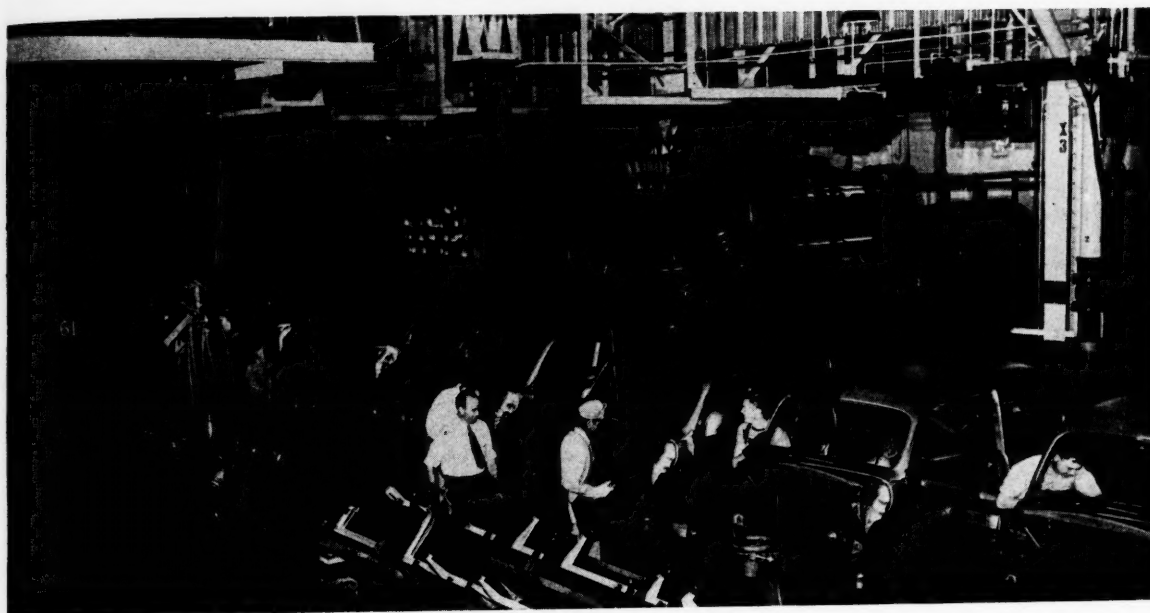
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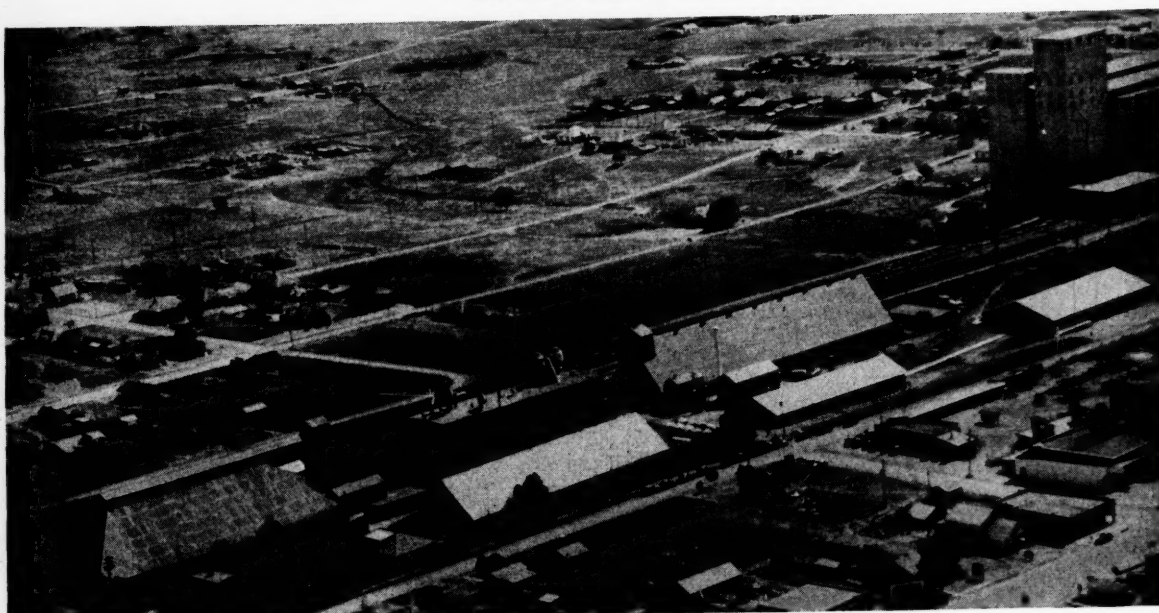


Above—Soap Plant.

Below—Assembling Automobiles.



Below—Cotton Oil Mill.



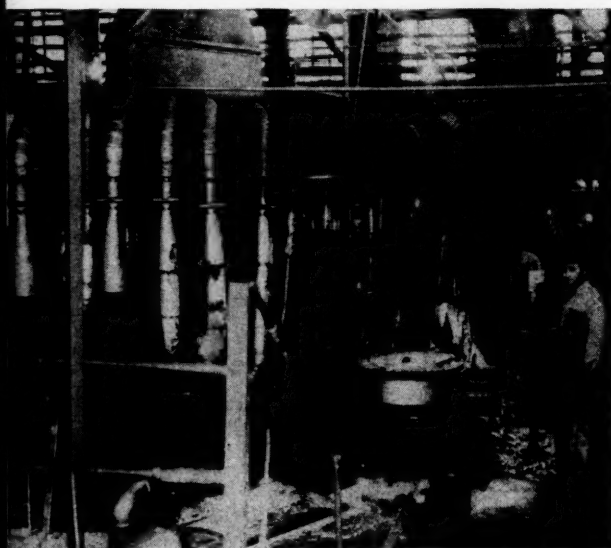


Above—Creosoting Plant, Orange.



Above—Mechanical Rubber Goods being Made at Dallas.

Below—Glass Container Manufacture is Important in Texas where Silica Sand and Fuel are Plentiful.



tarding influences for a volume of building unprecedented in the state's history.

Construction activity for 1945 exceeded that of 1944 by an estimated 60 per cent. Awards for all types of construction in 1945 were valued at \$245,438,277. This total included 6,865 different private enterprise projects and is exclusive of a considerable number of war projects that were still under way. The largest single job of the year was a \$22 million nylon plant.

No mention has been made of some vast expenditures for plant installation during the war, in the interest of being conservative. Hundreds of millions of dollars were poured into Texas for the construction of aircraft factories, ordnance plants and shipbuilding establishments. Probably no state in the Union enjoyed greater awards for this type of enterprise than Texas. They have been omitted from consideration because at present definite plans for their future have not been made public. Current developments indicate, however, that by no means will they be a total loss. It is reported that one of the aircraft factories, among the largest installed during the war, is projecting operation right on over into the postwar era, with a contract from the government for certain types of military planes and a more important one from a major airline company for commercial transport and passenger planes. It is reported that Texas Agricultural and Mechanical College is negotiating for the acquisition of one of the largest of the ordnance plants built in the state. These transactions furnish grounds for expectation that all war born plants will in time find useful places in peacetime economy.

When these expectations become a certainty and all the facilities set up for war are turned to peacetime production, it will be found that the Lone Star State made enviable progress during the war.

A summary compiled by the New York Trust Company, from figures supplied by the War Production Board, discloses that from July 1940 to May 1944, Texas gained new manufacturing facilities to the extent of \$1,259,038,000.

PETROLEUM AND GAS



Texas, as everyone knows, holds unquestioned supremacy among all the states of the union in the production of petroleum and related products.

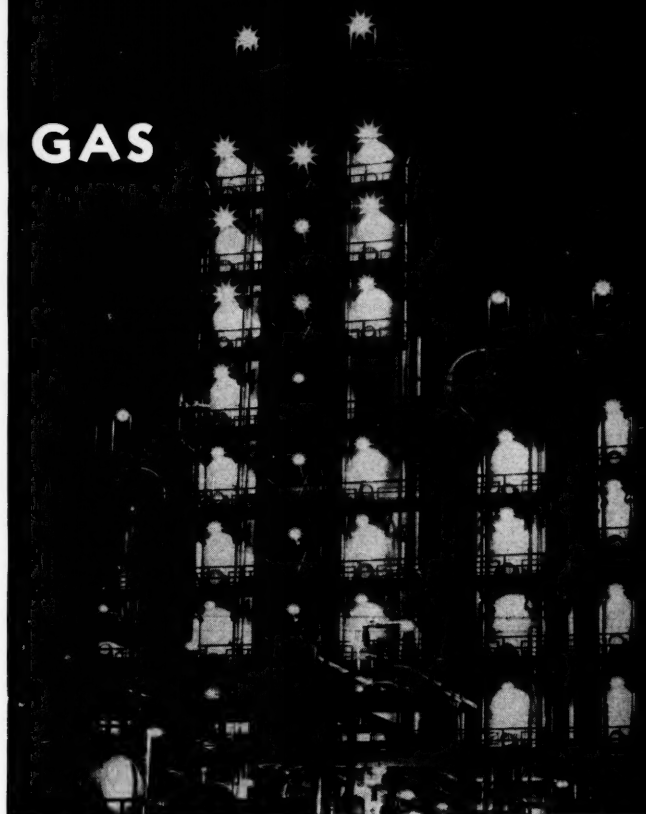
In 1945 the Texas oil industry produced 755,000,000 barrels of crude oil, a quantity representing over 45 per cent of the country's total, and greater than the combined production of the next two high ranking states.

In value of product it enjoyed even higher rating, its \$920,000,000 receipts from crude oil sales being 53 per cent of the national total. When to this figure is added income from sales of natural gas and value added by processing, the oil and gas industry of the state is found to be considerably better than a billion dollar per year business. Petroleum income from all sources in 1945 totaled more than \$1,300,000,000.

Nothing has done more to advance Texas along the road of industrial expansion than have its oil and gas resources. So great was the creation of new income from the development of these natural resources that the advent of the petroleum industry can be said to have freed Texas from practically all dependence on outside capital. Review of subsequent events leaves the conviction that the real industrialization of Texas began with, and accompanied, the development of its vast oil resources; and that petroleum and manufacturing advanced with tremendous strides, side by side.

This interrelationship was particularly emphasized during the war period when the Federal government sponsored more war plant building in Texas than in all but one other state. In fact, the war focused the national industrial spotlight on Texas and the value of its petroleum resources to manufacturing.

These resources have added value in that they may be expected to last a long time. The state's proved oil reserves total eleven and a half billion barrels and constitute 56 per cent of those known for the entire

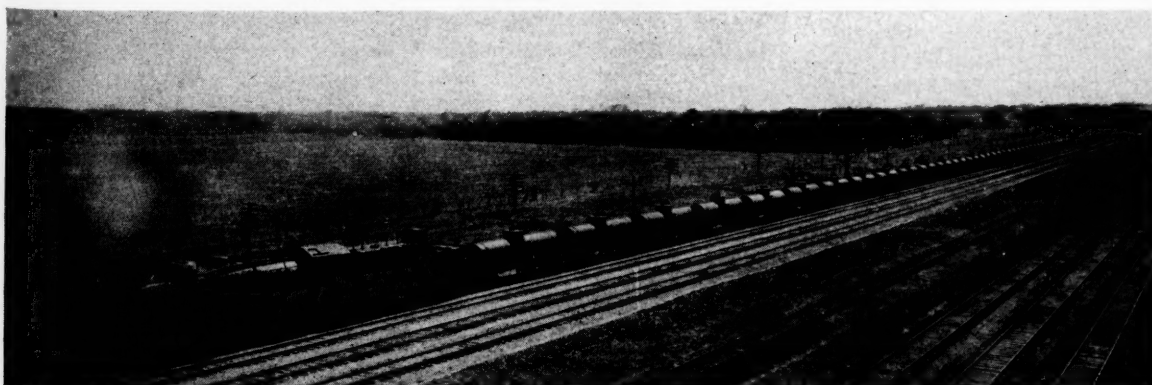


Night View of an Aviation Gasoline Unit at a Modern Texas Refinery.

country. Further discoveries are expected. The oil industry's intensive interest in discovering and developing new sources of oil and gas production was well demonstrated in 1945 when 1,552 wells out of 7,195 drilled were wildcat tests, more than one-fourth of all the wildcats drilled in the nation.

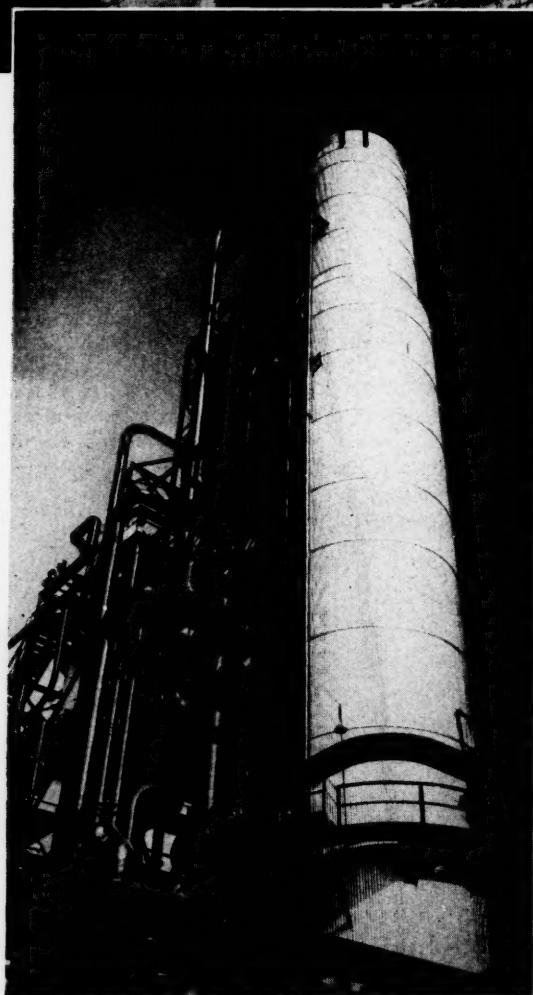
Long before the dawn of the twentieth century it had been known that petroleum lay stored beneath the fertile soils of the region. But in what quantities or at what great depths remained very much a mystery even after many of the first shallow wells came in. Not until 1901, when the Spindletop field was brought in with its wells of great volume and varying

Petroleum in Transit.





Above—Katy Recycling Plant, the World's Largest, Processes 458,000,000 Cubic Feet of Gas Daily, Producing about 9,000 Barrels of 70 Octane Gasoline.



Left—One of a Number of Towers at a Large Texas Refinery.

brought in with its wells of great volume and varying depths, did it become evident that black liquid gold in unbelievable quantity awaited only the probe of the drill.

The discovery of this field, following lesser developments, and followed by even greater ones, not only assured provision of raw materials for manufacturing plants and an abundance of low cost fuel with which to power the factories; it also promised the magical power of home grown capital with which to establish and expand factories on a sound foundation.

The first actual discovery of oil with commercial possibilities took place at Oil Springs in Nacogdoches County in 1866, thirty-five years before Spindletop and just seven years after the nation's first discovery of commercial oil in the Drake well in Pennsylvania.

A number of shallow wells were sunk in the Oil Springs area, and some twenty of these are recorded to have been still producing in 1890 when a three-inch pipe line was laid between Oil Springs and Nacogdoches.

In 1896 developments of relatively substantial proportions occurred at Corsicana in Navarro County.

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Wells in that vicinity produced 1,450 barrels during their first year. The field grew steadily and was augmented by new discoveries in the neighborhood of Powell. By the end of the nineteenth century the entire field was producing at the rate of over 800,000 barrels annually. The section in which these wells were located was destined to become, some 30 years later, the most extensive oil producing area of the world, the great East Texas Oil Field, with wells totaling over 25,000 in number.

In the meantime, however, other sections were coming into prominence.

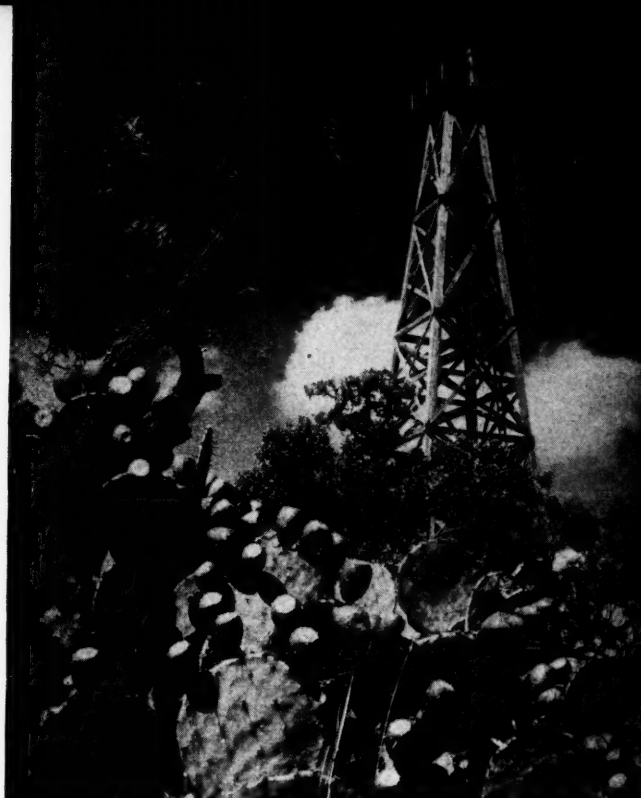
The Gulf Coast area first attracted dramatic attention with the discovery and development of the Spindletop field near Beaumont. Great jumps in output occurred in this section in rapid succession through discoveries at Sour Lake, Batson, Matagorda Bay, Saratoga, Humble, Dayton, Blue Ridge, Goose Creek, Orange County, Diamond Mound, Hall, Barber's Hill and West Columbia. By 1919 these pools had a combined production of 85 million barrels annually.

North Central Texas was the next section to join the oil parade. First discoveries there were at Henrietta, Clay County, in 1904. A larger pool was tapped at Electra in 1908. There followed in this area: the Burkburnett field in 1912; the Moran pool in 1914; the Strawn pool in 1915. The Breckinridge and Ranger fields in this section, larger than the others in volume of production, were opened up in 1917 and 1918.

Central Texas sprang into prominence in 1915 and 1916 with discoveries at Thrall and Mexia. In 1915 important discoveries were made just south of San Antonio where both oil and gas were found in substantial quantities, the discovery being followed by extensive development.

In the Texas Panhandle a wildcat well in Carson County was successful in 1921. Later discoveries in Hutchinson and adjacent counties added to the importance of this section.

Oil production in West Texas was started in 1923



Oil Derrick Through Texas Cactus.

through the discovery of the Big Lake pool on lands owned by the University of Texas permanent fund. During the first three years of its existence this field yielded over ten million barrels of oil.

More recent discoveries were of pools in South Texas and the lower Gulf Coast.

Today, surveys reveal that in all of the 254 counties of the state there are either completed oil projects or leases made for exploration. Over 500 separate pools and nearly 104,000 wells are producing. Nearly fifty

Aerial View of a Synthetic Rubber Plant, one of 29 Large Chemical Industries at Houston.

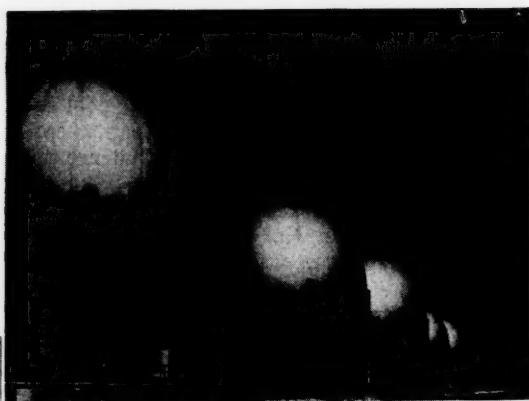


million acres of land are under lease for oil operation. More than three-fourths of the naturally flowing wells of the country, and almost one-fourth of those operating on mechanical lift, are in Texas. Investment in producing wells in the state approximates \$1½ billion.

Natural Gas

As a concomitant to Texas oil, natural gas is a high ranking mineral resource. Regarded for many years as a dangerous nuisance in oil fields, it has now become prominent for its usefulness. Intensive search for it is being pushed at all points where there is likelihood of its being found.

Its uses are three-fold and valuable. It provides low cost fuel for practically any desired purpose. It is a primary source of power in operations requiring pressure or recycling procedure such as those of reclaiming residues running from 30 to 40 per cent of crude oil left in the ground by normal pumping operations. Finally, it serves as a vital raw material in the manufacture of carbon black, natural gasoline, synthetic rubber, plastics, explosives and other diversified products of almost unbelievable number.



The Texas petroleum industry reports that it is now producing natural gas at the annual rate of 2,650,000,000,000 (over 2½ trillion) cubic feet—around 40 per cent of the nation's total. The proved natural gas reserves of the state aggregate 82 trillion cubic feet, 58 per cent of the national total and equivalent on a tonnage basis to eight billion barrels of crude oil. If included with the state's proved crude oil reserves, the combined total of 19½ billion barrels would almost equal the entire country's estimated reserves of crude oil.

The state's largest single gas reserve area is in the Panhandle district where a producible reserve exists of 25 trillion cubic feet, extending over an area of 1,400,000 acres. The prevailing gas pressure in this field is about 300 pounds to the square inch.

A group of fields in the eastern Gulf Coast region claim a combined reserve nearly equal to that of the Panhandle, but the components of the group fall into several producing regions not all of which are mutually contiguous. Pressure there, however, is very much higher than in the Panhandle, being registered in some places as high as 8,000 pounds to the square inch, probably the highest gas pressure known in the world.

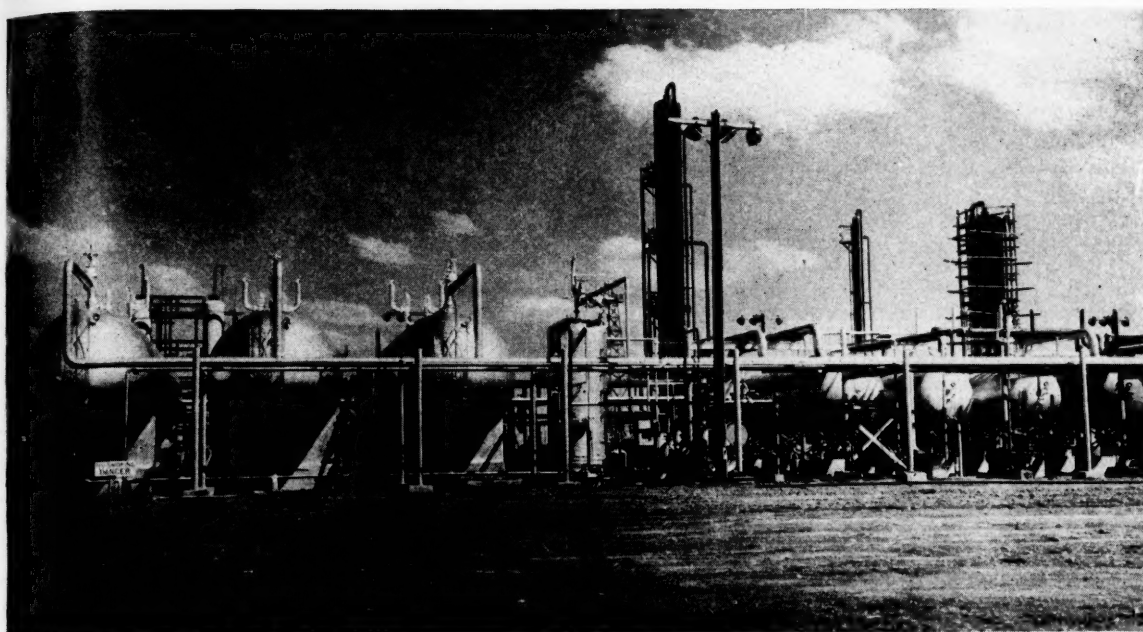
An impressive concentration of reserves also is present in the Lower Gulf Coast region, where not less than 12 trillion cubic feet are estimated to exist under relatively high pressure.

Pipe Lines

For transporting its vast production of oil and gas, Texas has many thousand miles of pipelines.

Left—Battery of Spherical Storage Tanks at a Texas Refinery.
Below—Amarillo Carbon Black Plant.





Pampa Gas Repressuring Plant.

Six years after the laying of the short pipe line between Oil Springs and Nacogdoches in 1890, a second line was placed in operation at Corsicana. Since then pipe line development has registered swift progress. Over 40 pipe line systems were in operation during the past war years, consisting of nearly 13,600 miles of gathering lines and nearly 23,000 miles of trunk lines. Among others completed during those years were the Big Inch and Little Inch lines, huge tubular transportation systems stretching from East Texas to the Atlantic Seaboard and capable of transporting crude oil by the hundreds of thousands of barrels daily, or equivalent quantities of natural gas.

Pipeline building for natural gas began early in the present century. Cities and towns adjacent to producing fields then began laying gas lines for utility service. The first line of substantial length was laid in 1910 and reached from Clay County wells to Dallas and Fort Worth.

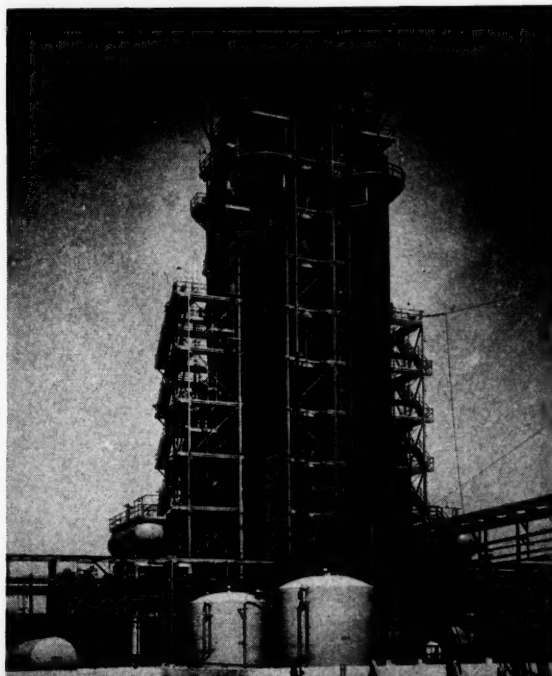
Ensuing years saw rapid expansion in this development and by 1935 over 100 companies operating gas lines were servicing 550,000 meters in a half thousand Texas towns and cities. It is estimated that at that time more than two million Texans were enjoying the benefit of home use of gas. Over 12,000 miles of pipe lines were required to effect that service.

From that time to the present, not only has intrastate service continued its spectacular expansion, but in addition pipe lines have been laid to distant points in other states. Interstate pipe lines now in operation range up to 24 inches in diameter and operate under pressures as high as 750 pounds per square inch. These lines radiate into 19 other states and into Mexico.

An investment of over a quarter billion dollars is represented in these oil and gas transportation sys-

tems and it promises to be an investment well laid. It will be of inestimable value in the chemical utilization of petroleum products which is growing by spectacular bounds and is expected to increase ten-fold during the next decade. It will help to perpetuate the influx to the state of new enterprise attracted by abundant raw materials, efficient low cost fuel and excellent transportation facilities. Above all it will be a strong factor in perpetuating and enhancing the incomes of more than a million Texans derived directly or indirectly from petroleum producing and processing industries.

Styrene, One of the Important Ingredients in Synthetic Rubber is Made in this Tower.

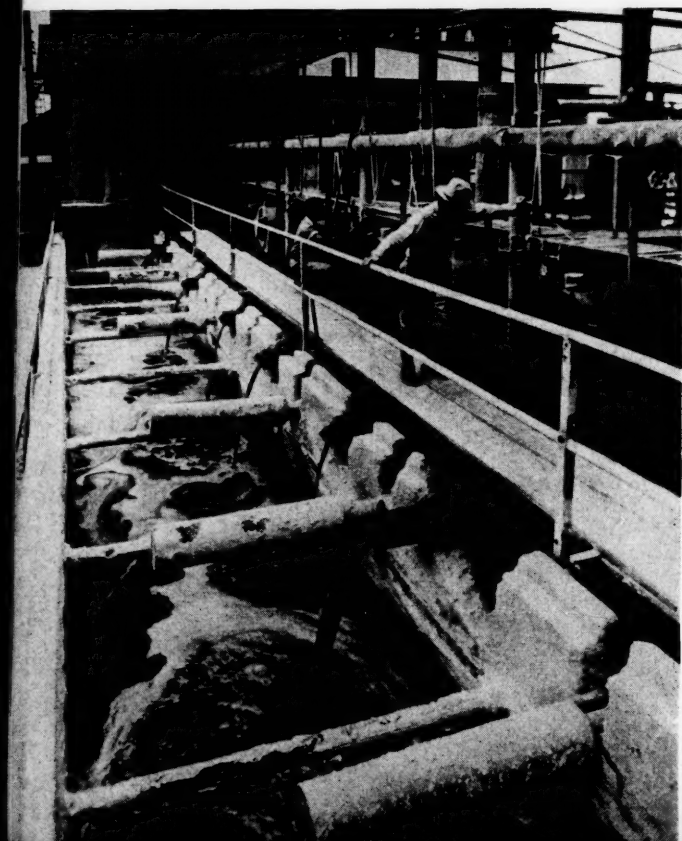




Electrolytic Zinc Plant, the Largest Industry to Locate at Corpus Christi in the Last Decade.

MINERALS

In addition to Petroleum and Natural gas which dominate the situation so far as revenue production is concerned, there is a wide variety of metallic and non-metallic deposits in Texas widely distributed over the state. While petroleum and related products account for better than 80 per cent of the state's mineral income, revenues from other mineral sources are substantial.



In its geological structure, the region partakes of formations belonging to both the Appalachian and Cordilleran mountains, which accounts in part for both diversity and distribution. A sector of the Appalachian fold extends as far west as the Trans-Pecos, there intersecting with Cordilleran elements. A large part of interior Texas lies between the two systems and is influenced by both. Thus in Texas there are found coal deposits related to the Appalachians and a number of metallic minerals prevalent in the Rockies. In addition to these there are some mineral products that are distinctive to the region in which the state is located. One of these is sulphur.

From a production standpoint, sulphur is probably second to petroleum in importance. Three-fourths of the sulphur produced in the United States is mined in Texas. Practically all of the remaining one-fourth comes from a sister state, Louisiana. Between the two the nation's entire production is supplied, if insignificant and experimental operations in one or two other states are ignored.

Texas sulphur, for the most part, is found in the honeycombed limestone formations and sometimes in salt domes, on the Gulf coastal plain. A large undeveloped deposit has been reported in the Trans-Pecos, but under present conditions, the two and a half million long tons produced annually comes from a few areas in the Gulf region. Income from this source in 1944 amounted to \$42,225,000.

Coal and lignite deposits, although far from being developed in full, represent vast mineral wealth. Known coal beds are estimated to contain over eight billion tons, and lignite deposits are figured to top thirty billion tons. Both are extensively distributed over the interior portions of the Gulf coastal plain and north central parts of the state. Coal production has not had the growth it might otherwise have had because of the present abundance and accessibility of the petroleum fuels, oil and gas. The vast bituminous deposits, however, constitute a potential reserve that

Left—Molten Sulphur.

may become of great value to economic development at some future time. Even at present, income from coal production is considerable. As the density of population increases and industrial processing forges ahead, possibly faster than new sources of oil and gas become obtainable, it seems almost inevitable that this great store of fuel wealth will grow more and more valuable.

Iron ores occur in the central and northeastern sections of the state and present a promising opportunity for development. Texas uses large supplies of iron and steel, especially in connection with its petroleum production. The firms now engaged in iron ore mining and smelting supply only a fraction of this demand. Some of the largest steel operations in the state are based primarily on scrap. Preparations are being made for additional processing plants, and it is generally recognized that these will be of great value in assisting industrial development to go forward at accelerated speed. Since there is a possibility that some of the coal veins of Texas may prove suitable for coking purposes, expansion of iron-processing facilities might produce the dual benefits of opening up wider use for both of these natural resources.

Other minerals known to be present in substantial deposits comprise a long list. While their present development has by no means reached a stage of maturity, the aggregate income derived from them contributes considerably toward enhancing the wealth of the state.

The ore minerals of lead and zinc occur at a number of localities in the Trans-Pecos region. While the known deposits are not greatly extensive, a steady production has been recorded for a number of years. Quite frequently they are also a by-product in the production of silver.

Bleaching clay or bentonite is worked in the coastal area and also in the High Plains section. It is used principally in the refining of petroleum products, but also for vegetable oil refining.

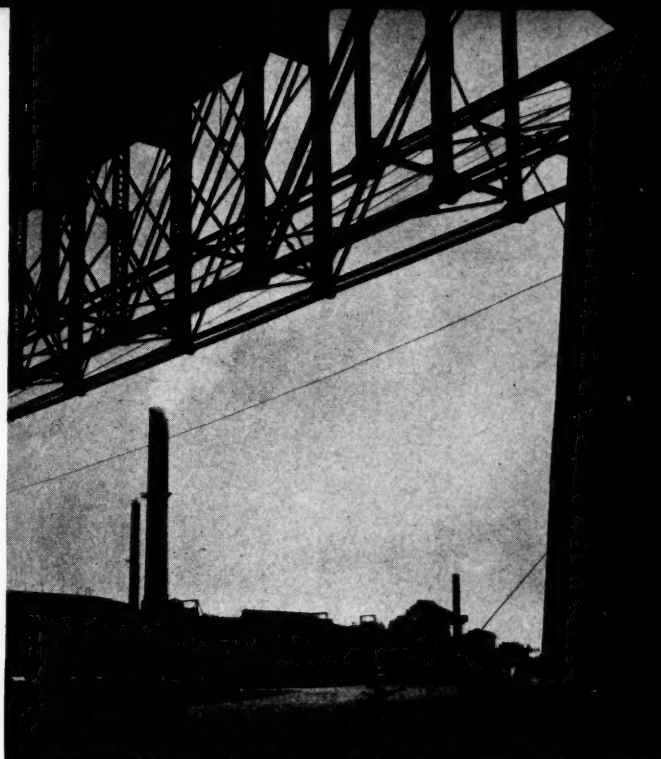
Cement materials, consisting of limestone and clay are abundant and widespread.

Copper is produced in appreciable quantities. Present production comes principally from the Trans-Pecos but substantial amounts are known to exist also in Central and North Central Texas.

Fertilizer ingredients including guano and potash materials are present in a number of localities and in considerable quantities.

Gypsum is widely distributed and extensively worked. Its most noted occurrences are in the region of the Permian Plains east of the cap rock of the High Plains and in Gulf coast districts. From gypsum are made plaster of paris, wallboard and cement.

Tin has been discovered to exist sparingly but in sufficient quantities to have made shipments feasible during the extreme shortages of the war period. Texas tin exists in a form known as cassiterite and is found chiefly in the region of Franklin Mountain. The cassiterite appears in thin veins or stringers, sometimes intermixed with granite. Recent prospecting leads to the belief that further investigation may uncover veins holding possibility for development under normal conditions.

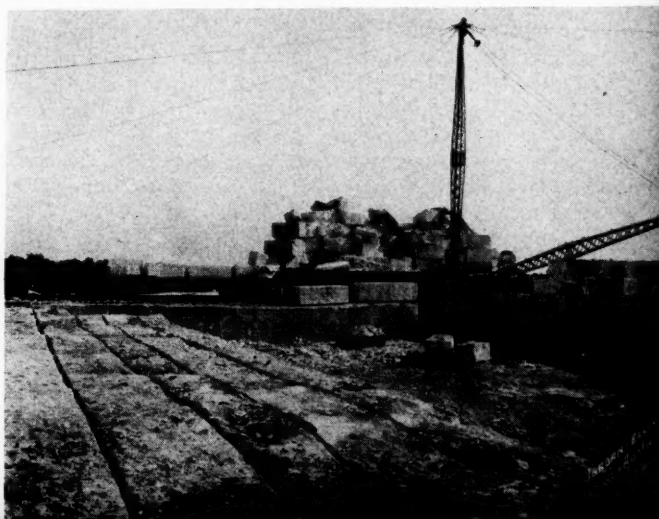


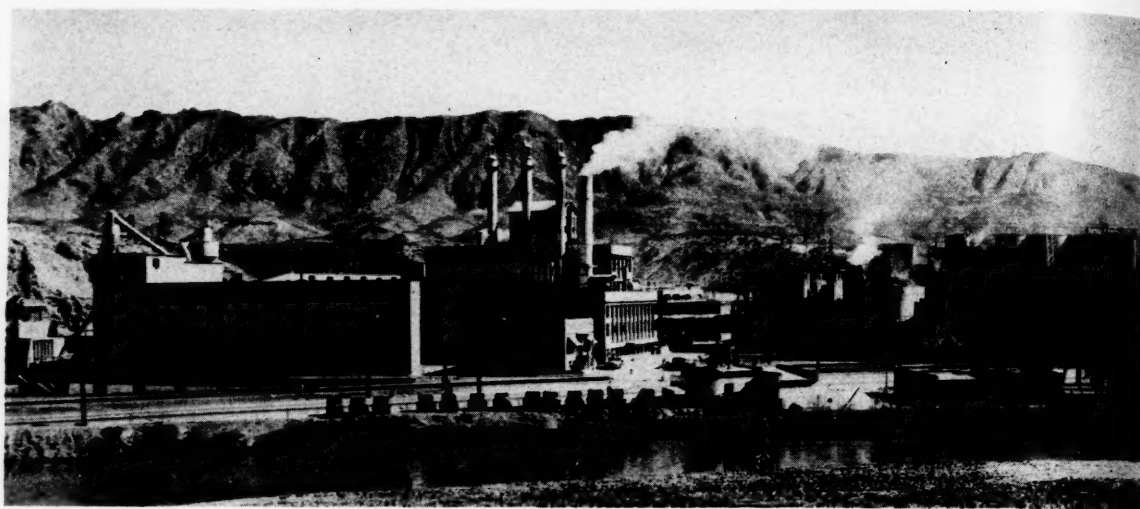
Above—Smelting Works Just Outside of El Paso.



Above—Quarrying Granite Jetty Stone in Llano County.

Below—Texas Oolitic Limestone Being Quarried and Shipped.





Cement Plant in the Rio Grande Valley.

Dolomite occurs in the north central part of the state, particularly in areas adjacent to the granite outcrops of the Llano area.

Mercury is produced in the Big Bend of the Trans-Pecos, and it is estimated that between 150,000 and 200,000 flasks of the metal have already been shipped from the producing region. Each flask contains 76 pounds of metallic mercury.

A turquoise deposit has been opened up in the Carizo Mountain region of the Trans-Pecos, and considerable quantities of the material have already been shipped out.

Silver has been produced in Texas with fair consistency over a number of years. While production has not been large and has been subject to considerable fluctuation, output at times has been appreciable. Most of the production of recent and former years has come from the Shafter District of the Trans-Pecos. Gold also has had steady production in Texas, although in moderate quantities. Primarily it is a by-product of silver operations but occurrence of the metal in independent formation is reported in a number of mountainous regions of the state.

Salt occurs in immense quantities in a number of parts of the state, mainly however, in the coastal and High Plains sections. In some localities it is mined by underground methods, and in others it is extracted through the medium of wells. In both forms, salt has been produced in the state for many years.

Asbestos is present in some of the rocks of the Llano section.

Asphalt occurs in limestone form in a number of localities, and a considerable number of large quarrying operations utilize these deposits as ingredients for road-paving materials.

Barite deposits of varying size and quality appear in a number of localities. Production heretofore has been mainly on an experimental basis, but its growing popularity as an admixture in drilling fluids holds out good promise of greater utilization in the future.

Basalt in large masses is present in the Trans-Pecos. Its utilization until now has been limited to road ballasting material.

Brines with strong concentrations of mineral salts are widely distributed. Consisting of both sulphates and chlorides of sodium, magnesium, calcium and potassium, they extend sometimes as far as one hundred feet in depth in one of the localities, the south High Plains.

Prospecting for refractory clays has uncovered varieties suitable for building brick, tile and pottery throughout wide sections of the state, with fire and china clays occurring at frequent intervals. Caliche, valuable for road building is abundant in the High Plains and in southern sectors. Celestite and strontianite, salts of which are used in the production of flares, tracer bullets, fireworks and similar products are known to exist in a number of localities. Texas supplied an important part of the celestite required by the nation's armed forces during the war.

Chalcedony, a relation of the opal, is present in considerable quantities in some localities of the Coastal and High Plains. In both sections the formations are massive. This material also occurs in other localities, usually as a cementing filler to veins of sandstone and limestone.

Drilling clay, used in drilling operations for oil, and consisting of various types, is found in a number of localities.

Feldspar, suitable for ceramics and glassware, is extensive in the Llano section. Quantities of this product are utilized in refractory operations in Mexico. The greater portion of this material has resulted from the disintegration of weathered granites which are abundant in the Llano section.

Refractory chromite has been uncovered in the central part of the state, and some experimental mining operations have been undertaken. The full extent of these deposits has not yet been fully established. The same situation as to ultimate potentiality attends re-

cent discoveries of manganese, molybdenum, tungsten and other ferroalloy metals.

Fluorspar, used in the manufacture of certain types of steel and aluminum, and also in high-octane gasoline, is present in several localities of the Trans-Pecos and Llano districts. Varying percentages of calcium carbonate, along with siliceous material and iron oxide, are associated with most of these fluorspar deposits. The presence of these impurities would necessitate mill treatment to bring the basic metal up to commercial grade. Development work undertaken up to the present has not proceeded far enough to determine accurately just how promising the possibilities may be for extensive operation. There are known localities, however, particularly in the Eagle Mountain region where fluorspar deposits exist without objectionable impurities.

Large bodies of graphite in fine flake form are present in the Llano area and production of the material is underway in that region for use in crucibles and foundry facing operations. Mica is another material that occurs in large quantities, its most noteworthy appearance being in the Van Horn Mountain region. Serpentine is to be found in wide variety in a number of sections, mainly those adjacent to or related in structure to the Llano section where it is particularly prevalent. It is used extensively in road surfacing materials. Silica in the form of massive quartz occurs in the same regions, and is used frequently as a roof material ingredient. In the same regions, soapstone also is present, and is used to some extent for fireplace and hearth linings.

An interesting deposit, hitherto unexplored to its full possibilities, is one in the Llano district in and beneath the bed of Lake Buchanan. It consists of a body of rare earth minerals—compounds of beryllium, cerium, erbium, thorium, uranium, yttrium and other rare elements of minerals. Many of these are said to be radioactive and have become particularly significant by reason of the intensive research that is being made into all agents of radioactivity.

Other minerals existing in varied degrees of extensiveness and distribution are greensand, grinding pebbles, mineral water, novaculite, common opal, peat, rhyolite, titanium, topaz, tripoli and volcanic ash. Some, if not all, present definite possibility for future development.

Texas is well supplied with materials to serve as dimension and building stone. Besides its extensive masses of limestone, beds of sandstone, flagstone, granite and marble occur in great abundance, especially in the central part of the state where their nearness to centers of intensive industrial expansion endows them with special importance in view of the growing trend toward more permanent types of structures. Sandstones are being extensively quarried in a number of locations. Flagstones appear chiefly in the Del Rio district, where they are light in color and often banded in variegated shades. Granite formations are found in the Trans-Pecos as well as Central Texas. Those in the latter region have been quarried for years. They are of various types and range in color from pink to very dark brown.

The marble of Central Texas presents a wide variety,

with a number of attractive types. Brown oolitic marbles are present in thick beds in the Gap Mountain area of the Cambrian. The Girvanella strata offer another attractive type. These are made up of white spheres of fossil origin, closely imbedded in stone grading from cream to yellow in natural color. Heat treatment changes the color of the stone to red, but the spheres remain white. Some strata contain layers of green to gray mottled marble, and some of these massive layers are more than a hundred feet thick, occupying areas of several square miles. Extensive beds of ordinary gray marble are also present.

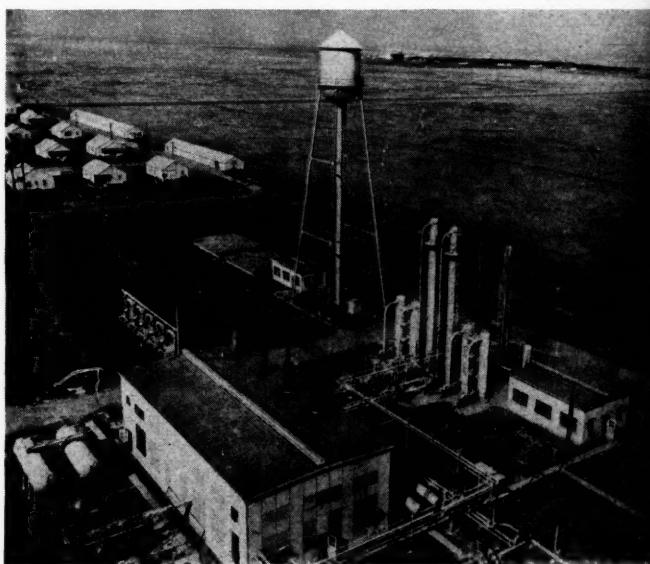
Mineralogically, Texas is a wealthy state, probably the richest in the entire Union. At least, as far as known resources are concerned, it is the richest; and as in the case of its other natural resources, it has far more than necessary for its own sole utilization. Attractive opportunity is present for investing capital to undertake operations that will not only tie in with the expanding economy of the state but also reach out and supply needs of the rest of the nation and even more distant lands and peoples.

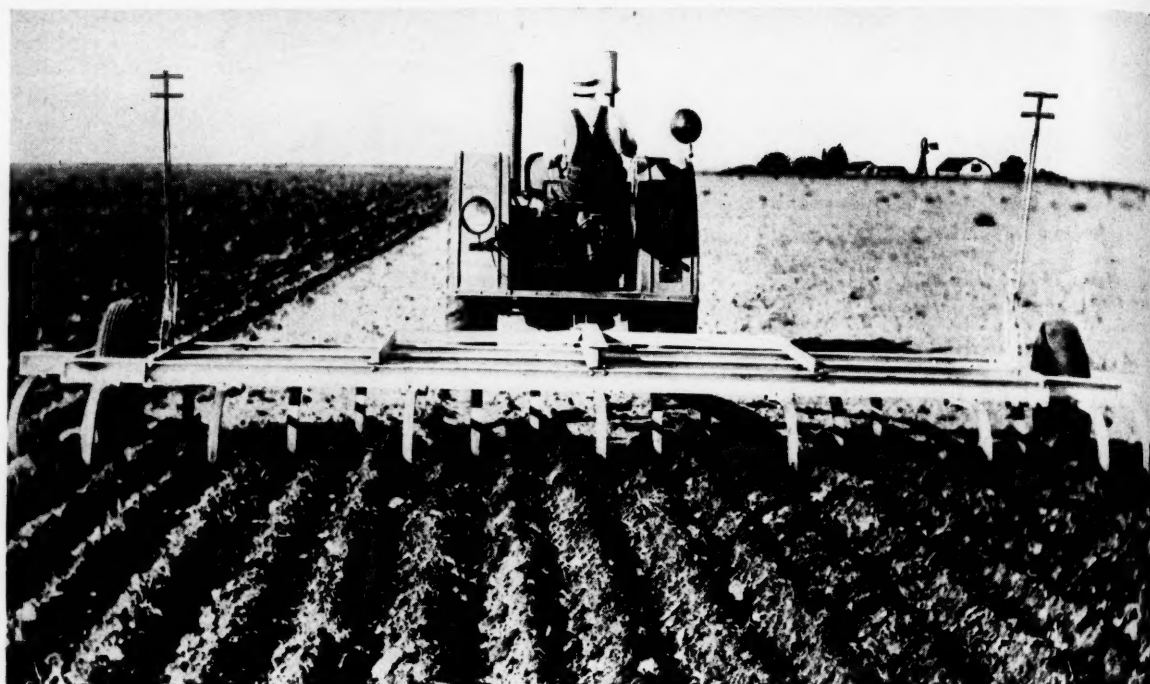
An outstanding example of how such operations may benefit the state in its rapid industrial expansion is to be seen in the results of the huge magnesium facilities installed at Freeport during the war to produce magnesium chloride from the briny waters of the Gulf.

With the most diversified mineral resources of any state, Texas production includes between seventy and eighty different minerals. About 90 per cent of the counties of the state enjoy mineral output of one kind or another.

The diversity of Texas minerals is a natural geological result. The varied geological structures, with their folds, faults and intrusions, have brought the many valuable minerals together in natural underground storehouses.

Texas is the World's Most Important Producer of Helium. The Plant is at Amarillo.





Multiple Plowing in Texas. The Unit is 34 Feet in Width.

AGRICULTURE

When farming and ranching are considered together, Texas leads all other states of the Union by a wide margin in value of production by these rural industries. It ranks outstandingly first in range livestock production; second in crop production considered separately.

The wide diversity of geological outcrops with their resulting vegetative adaptabilities have produced a variety of soils almost as widely diversified as those of the entire nation. Because of this variety of soils and a similar diversity of climatic regions, there are few crops which cannot be grown successfully in Texas. The soil types, augmented by unusual length of growing seasons, are sufficient to accommodate almost every major kind of agricultural enterprise known to the United States, as well as some crops that are indigenous to regions south of the border and that flourish in few spots of the nation.

The scope and wealth of the state's agricultural resources and their potentialities can be pictured somewhat, but only partially, from results already achieved. The forty-odd million acres now being tilled, out of a total of over 160,000,000 acres, leaves vast acreage available for additional cultivation. Even so, cash income from crops in 1944 reached the impressive total of \$654,773,000.

Agricultural crops in Texas, as in the nation, fall

into ten general groups: food grains, feed grains, fibers, forage, vegetables, fruits, nuts, oil-producing, syrup and sugar crops and tobacco. In most of these Texas ranks first or close to the top in comparison with its sister states.

The two outstanding food grains, wheat and rice, are turned out in important volume. The wheat belt lies in the northern part of the state adjacent to other large wheat-producing sections, and produces a crop sufficient to take fourth place among the states in winter wheat production and seventh place in wheat of all kinds. In 1944, a total of 3,934,000 acres were given over to wheat crops and 74,746,000 bushels were harvested. Income derived therefrom was \$86,414,000.

In rice production, Texas holds second rank. Its rice growing sector lies in the upper Coastal Belt. In this region large acreages are particularly adapted to abundant production of rice at strikingly low cost. The bulk of this crop is cultivated and harvested by machine methods.

The entire production is under irrigation, the water coming from the Colorado, Brazos, San Jacinto and Trinity rivers and other coastal streams. It is estimated that the state has resources for two or three times its present rice crop, and the building of further irrigation facilities is expected to expand the crop

substantially. Acreage in 1944 totaled 392,000; cash income amounted to \$43,501,000.

While barley and rye are minor crops in Texas, as they usually are elsewhere, the soil and climate of North Texas are admirably fitted for their production, and substantial quantities are harvested in a number of localities. Lack of demand rather than lack of resources is all that stands in the way of far greater production.

With respect to production of corn, which is both a food and feed grain, a position within the first ten states has been maintained for many years. The crop is widely distributed, being grown in nearly every part of the state. In acreage it ranks second to cotton, 4,973,000 acres having been harvested in 1944. The cash income of \$11,839,000 for that year by no means reflects corn's actual value, since by far the largest part of the crop is habitually used for feed on farms on which it is produced. It can almost be said that corn growing in Texas antedates Texas history. The cultivation of corn, or maize as it originally was called, is believed to have originated in Central America and to have been introduced from there in Texas territory by trans migratory Indian tribes. Be this as it may, it is recorded fact that the first discoverers found corn growing on Texas soil.

They also found a crude agricultural system practiced by Texas Indians which presents an interesting contrast to modern methods. The accounts handed down relate that the seed corn was planted in the spring in holes about four feet apart which had been made in the ground with a sharp stick. Cultivation that ensued consisted solely of weed pulling by hand and casual loosening of soil from time to time around the roots of the growing stalks with pointed sticks. In the fall, harvesting took place, somewhat as it does today.

Today, mechanized, cross-check planting, multi-unit cultivation and advanced forms of fertilization are a far cry from the rude procedure of the seventeenth and earlier centuries. Texans have not lagged in adopting constantly improved methods of cultivation, and volume of production per acre has shown steady growth from year to year.

The other two major feed grains, grain sorghums and oats, are annually produced in outstanding quantities. Texas holds first rank persistently in the first of these grains and is always among the first ten states in the second. The development of the grain sorghum crop has been more interesting than the records usually would indicate. Used primarily as local stock feed, its importance is poorly indicated by cash income statistics. Introduced to Texas agriculture during the latter part of the last century, the crop has grown quietly and all but unnoticed until it now occupies third place in volume, preceded only by cotton and corn. Its value is estimated to hold equivalent rank. It is also one of the most widely grown crops and, like corn, is found in almost all parts of the state. This crop has contributed inestimably to the advancement of the Texas livestock industry, furnishing an economical and easily grown feed with much the same feeding qualities as corn.

As with the other grain feeds, much of the oats produced in Texas goes for home consumption. Dur-

ing the years of large harvests, however, substantial quantities enter commercial channels. Acreage planted to oats in 1944 totaled 1,544,000; cash income \$11,287,000. Oat production is confined primarily to the north central, middle western and central parts of the state. Over thirty-eight million bushels were produced in these sections in 1944. The growth of stock farming, poultry raising and related industries is demanding constant expansion of the oat crop.

There has never been any question regarding Texas' rank as a cotton producer. The incentive for immigration to the region was the availability of fertile lands at little or no cost. At that time cotton was probably the world's most important commercial crop. It was highly natural that it should at once assume a position of supremacy among Texas crops.

Like corn, cotton was found growing in the western hemisphere by its discoverers. It was first found cultivated and manufactured in a crude way in the islands of the West Indies, in several regions of South America and in Mexico. Cotton was also grown by prehistoric peoples in Arizona and New Mexico. A species of wild cotton grows in some portions of these states to the present day.

The first attempts to grow the staple commercially in the American colonies were made along the southern sector of the Atlantic seaboard. It was not long, however, before the bulk of the planting gradually shifted westward. As early as 1839 a substantial portion of the cotton produced in the United States was grown in the south-central and southwestern states. At that time Texas was still under Mexican rule, and pioneer settlements by immigrants from the United States had been going on for only ten years. Even then, nevertheless, Texans were turning out cotton at the rate of 7,000 or more bales a year. During the era of the Texas Republic, which came into being a

Texas is a Large Rice Growing State.





Dusting Citrus Orchard in Rio Grande Valley.

few years later, its swiftly growing importance as a cotton producing country had much to do with the support the infant nation received from England, France and the United States.

By 1850, thirty years after the first settlements were established, and five years after annexation as a state of the Union, 650,000 acres of land had been improved to a state of high productivity and millions of other acres were being cleared and put in readiness for the plow against the time when hands could be found to farm them.

Ten years later, cultivated acreage had increased to over two million. In that year, 1869, Texas produced a half million bales of cotton which, according to available statistics, gave it the leadership among the states in cotton production, a leadership which has never since been relinquished.

Confusion attending the Civil War brought a lull in agricultural expansion, but the end of hostilities found cotton again assuming its original importance. During the decade of the 1870s, the number of farms increased 185 per cent; by 1880 the rural population numbered 1,455,977 out of a total for the state of 1,591,749. Even as late as 1890 farm population constituted 84 per cent of the whole.

From 1890 on, intensive construction of railways and highways into the interior sections began to foster diversification of crops. Corn, in particular, became a staple feed and food crop. Wheat, oats and other crops also got off to a good start. When the great demands were created for these commodities by the first world war, Texas was ready to forge toward the front in their production. Today much of the great central plains and of the northern plains as well has been converted into a vast natural granary.

Cotton, however, is still the big crop. Today it is

produced in varying quantities in all parts of the state, even in the High Plains where ranching and wheat growing reign supreme and in the Edwards Plateau and South Plains where sheep and goat raising predominate. Cotton growing in the Trans-Pecos is wholly by irrigation.

Present trends in cotton culture are in the direction of reduced acreage, improvement of yield through careful selection of seed and fertilizing materials, and mechanization of cultivating and harvesting procedure. Diversification of crops is being pushed vigorously and successfully. While Texas leads the nation in cotton production, turning out almost one-fourth of all the cotton grown in the country, it is far from dependent upon that crop alone. Cotton acreage has decreased over 30 per cent during the past decade. At the same time farm cash income levels have increased 40 per cent over those of ten years ago.

Costs of production are being reduced by machine methods. The pattern of cotton production in Texas has lent itself readily to the principles of engineering and mechanization. In this pattern both topography and spaciousness are significant.

It is understandable that Texans should do all in their power to try to improve cotton growing. A quarter of a billion dollars is a substantial sum, even in these days of staggering balance sheets; yet it is a smaller sum than that which cotton by its lint alone brings in as cash income to Texas each year. In 1944, cash income from cotton lint was \$266,979,000; acreage grown to cotton, 7,200,000.

Along with its high rank in farm crops, Texas also stands high in truck crop production. It ranked fourth for 1944 in production of vegetables, realizing from these a cash income of \$71,030,000. It stood fifth in

fruits and nuts, with cash income from these totaling \$51,647,000.

The development of its commercial truck crop industry has been of great value in contributing to the state's desired diversity of agricultural economy. Growth in this phase of its rural industry has been spectacular. In 1923, only 17,000 carloads of fruits and vegetables were shipped from the state. Now the average is around 60,000 carloads annually. Texas holds first rank in output of pecans, beets, spinach and cabbage; second in grapefruit, figs, onions, tomatoes and carrots; third in oranges and strawberries and fourth or fifth in a great number of other truck and fruit crops.

Due to its wide latitudinal range, the state as a whole has a very long producing season. This season begins with midwinter shipments of vegetables from the Rio Grande Valley and extends up to late spring for shipments from the more northerly sectors.

One of the most remarkable developments in Texas crop production in recent years has occurred in the citrus growing industry. Although there had been some orange production in the state a number of years earlier, it was well after the turn of the century before it was discovered that the soils of the Rio Grande Valley and adjacent areas were capable of producing grapefruit of a quality second to none in the United States. Since this discovery, production has grown by leaps and bounds until output of grapefruit has now reached a total of over 20,000,000 boxes a year. Production of oranges likewise has made important advancement. While the preponderance of citrus acreage is in grapefruit, annual output of oranges runs not much under 5,000,000 boxes. In addition, good records are being made for lemons and limes, tangerines and kumquats.

Thousands of acres are now planted to citrus groves, all of which have yet to reach maturity. As they do so, even more impressive results may be expected than those now prevailing.

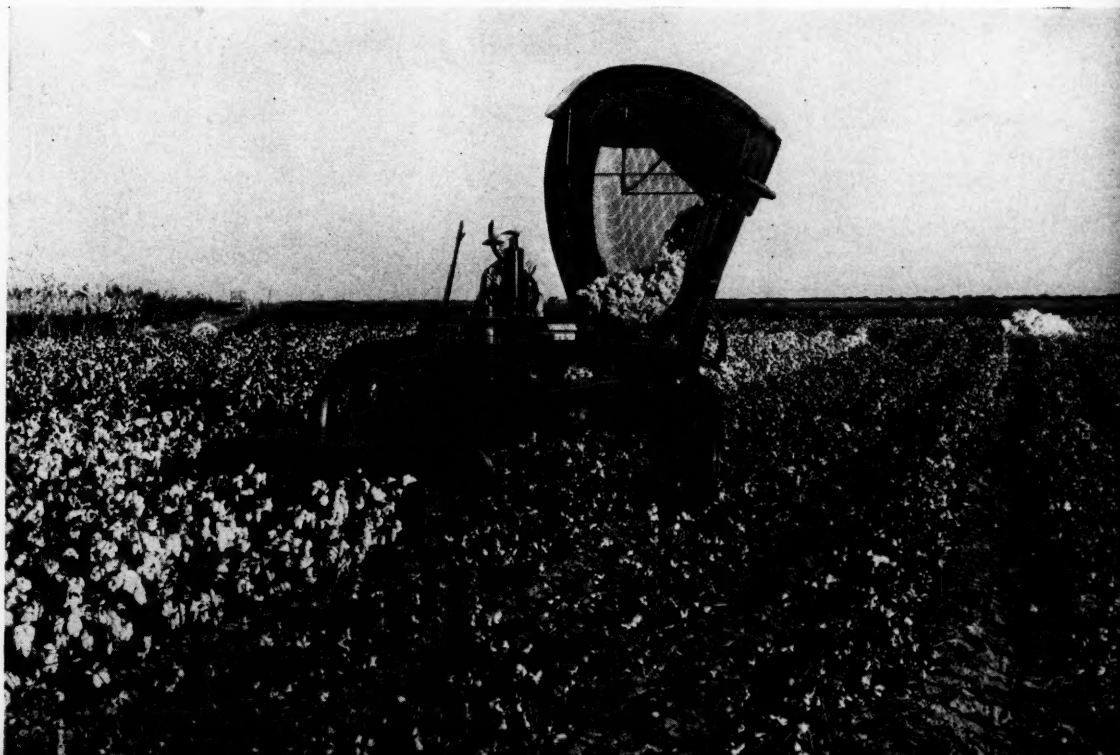
The same may be said for deciduous fruit growing facilities. While notable progress has been made in these, there is room for great further expansion. Excellent climate and appropriate soil are present in abundance and a steadily growing interest on the part of Texas farmers bodes well for orchard development.

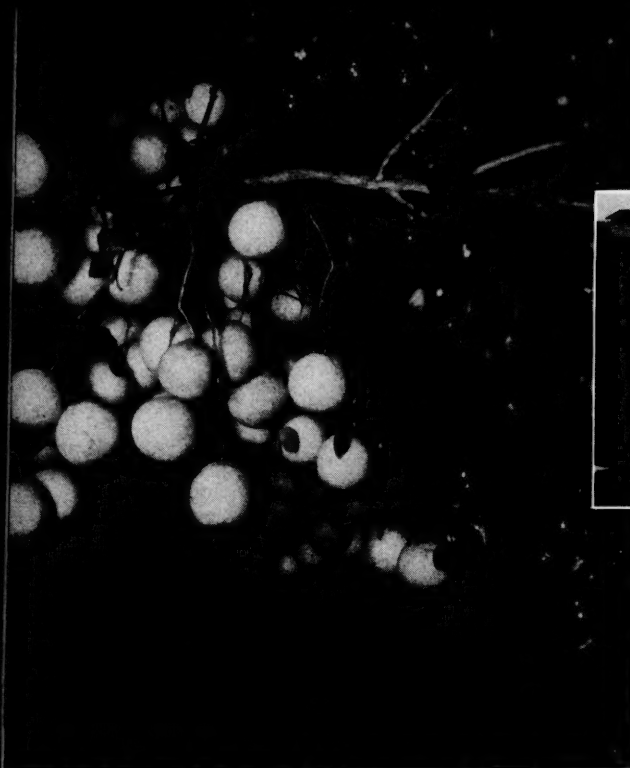
Peaches got their start in commercial production as far back as the early 90s; since that time a great number of commercial orchards have been set out. Soil and climate in a number of areas of the state are ideally adapted to this luscious fruit. Furthermore, improved transportation, bringing markets closer in point of time to producers, together with modernized refrigerating methods, has given considerable impetus to activity in this crop and makes the future bright for further expansion.

Pears are grown throughout the northern half of the state and in the El Paso valley. Up to the present, the bulk of production has gone into home consumption, but a noticeable increase in commercial activity has been apparent during recent seasons.

In pecan production, Texas not only leads the nation but can also point to evidence that its pecans constitute one of the oldest crops of the western hemisphere. That pecans were used by prehistoric Indians is generally recognized. Quite appropriately, the pecan tree has been adopted as the State Tree. The alluvial valleys of the Trinity, Brazos, Colorado and Guadalupe rivers and their tributaries are especially adapted to pecan production. Fifty or more counties turn out large quantities, and beyond these

Mechanical Harvester Operating in a Texas Cotton Field.

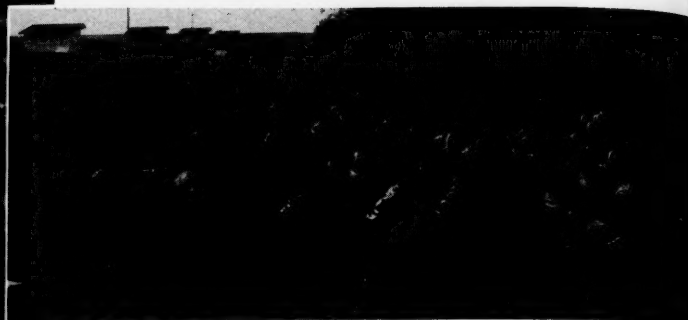




Above—Grapefruit as Grown in South Texas.

there is substantial prevalence of growth along practically all the streams of the state. A large part of present day production comes from native trees, but this growth has been augmented by numerous orchards set out in various sections, and the native trees have been greatly improved by budding and grafting. Average annual output approximates fifty million pounds and brings in cash income of well over \$2,000,000.

Less ancient in Texas, but more important from the standpoint of cash income, peanuts play an important role in the state's agricultural economy. In 1944, acreage totaling 770,000 was harvested and produced cash income of \$24,981,000.



Above—Domestic Turkeys on an Alfalfa Range.

An important but infrequently mentioned product of the state is broomcorn. Peculiarly, it might seem, the principal producing sections are found in the opposite extremities of the north and south sectors, although varying degrees of output are found scattered in a number of other sections. Between 75,000 and 100,000 acres are harvested annually with production fluctuating around 12,000 tons. Cash income regularly exceeds \$1,000,000.

Altogether, more than one hundred products of the soil are produced in the state, including olives, candy cactus, papayas, quinces, avacados and the so-called industrial or chemurgical crops. In these last, for which new uses are being developed at rapid pace, great interest has been aroused. Along with new developments in the uses of well-known products such as cottonseed, flax, hemp, and Southern pine cellulose, especial attention is being directed toward newer developments in products such as tung oil and soybeans.

Before the war tung oil was imported into the United States at the average rate of 115,000,000 pounds a year. On the acid soils of southeast Texas it has been found that tung trees flourish in remark-

Irrigated Texas Land.



able fashion, and extensive orchards have been planted. Some of these are already in production and others are nearing productive maturity. Tung oil has been designated by paint specialists as the most efficient oil for lacquers, varnishes and other coating materials for which quick drying and permanent surfaces are prime prerequisites.

The far-reaching development of agricultural economy in Texas has been greatly influenced by the impact of rapid industrial progress. As expressed by the faculty of the University of Texas in a summary of the resources of the state, entitled "Texas Looks Ahead," the kind of agriculture with which Texans are concerned is "dynamic, regenerative, augmentative, genetic and creative.

"It is an agriculture that is increasing in productivity per acre, in qualities of products in both plants and animals with lowering costs per unit of product and increasing standards of living for the producers. It means that a process of soil building must replace erosion and other forms of soil depletion, that farmers must find ways to integrate a sufficient number of agricultural enterprises to give them maximum profitable employment and the greatest insurance against shifting prices and crop failures. It means the coordination of natural forces of science and technology of industry and of industrial markets to make a permanently prosperous agriculture."

There are about 130 soil series in the state's area, with around 500 soil types, according to studies of Texas experiment stations. These studies show the soils to range through every textural class and to contain many colors and combinations of colors, with structural characteristics numerous and varied.

The productive capacities and crop adaptabilities have a wide range, many of the soil types being found in no other parts of the United States. The soils of the state differ in characteristics according to the character of the parent-materials, climate and other environment factors. Soil development processes differ in various regions; accordingly great regional soil differences exist, as well as local differences.

Texas, in its earlier years, and even in the present, has been able to rely strongly upon its agricultural productivity. Soils are one of its greatest assets. Soil utilization for the production of crops and for grasses has contributed greatly to its wealth and progress. Agricultural industries are basic in Texas, as indeed they are in most of the world.

To perpetuate its soil resources, advocacy of conservation began in the state as early as the 1880s when the first Texas farm was terraced. By 1900 terracing was receiving appreciable attention in practically all parts of the state.

Educational programs in conservation were begun soon after the turn of the century by farm co-operatives and were later taken up by the extension service of the Agricultural and Mechanical College of Texas. In 1911 the teaching of soil conservation by A & M College, at the college and in the field, was authorized by the state legislature. Terracing and other forms of conservation work became a permanent part of the A & M College program in 1916.



Above—A Large Texas Dairy Barn.



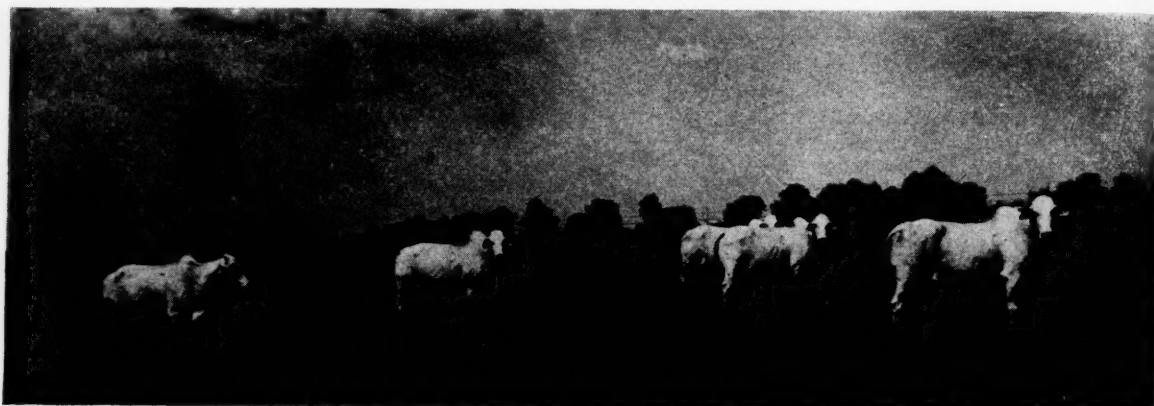
Above—Cotton.

Below—Picking Tomatoes in Rio Grande Valley.





Above—Silk Culture, a Growing Texas Agricultural Enterprise.



Above—Brahman Cattle. Below—Angus Cattle on a Diversified Farm in South Texas.



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Goodrich Ranch near Lampassas.

LIVESTOCK

Although both farming and manufacturing have made deep inroads on the grasslands of the range, there are still around eighty million acres of Texas lands that remain best suited to livestock raising. This is about half of the 167,934,720 acres contained in the state and nearly double the area now being put to the plow.

Particularly in the western and southern parts of the state is the ranch the prevailing source of rural income, with vast portions of its wide open spaces devoted to cattle raising for beef and dairy.

Texas, traditional leader in beef production, was the cradle of the range cattle industry in the United States. In this role, its livestock marketing was a flourishing activity even before cotton achieved outstanding prominence. Today it is still the leading cattle producing state of the Union. Two million head of cattle are shipped out annually and it is estimated that over twenty million head of livestock, including cattle, swine, sheep and goats, graze on its plains and prairies. Income from livestock, poultry, and their products amounted to \$418,486,000 in 1944, a gain over the prewar year 1939 of \$185,160,000 or 80 per cent.

While cattle raising is as ancient as history itself, the procedure of range livestock production pursued in the United States is distinctive and picturesque, and this procedure had its birth in Texas. The cowboy, symbol of the industry, in whom is combined intriguing color and marvelous skill, is a Texas product. The western ranges, all the way to the Canadian border, were first stocked with Texas cattle. The blood of the early Texas longhorn still flows in the veins of some of the best breeds being raised today.

The story of Texas' cattle industry is epochal.

It is believed that the first cattle in Texas migrated from Mexico, or were brought in by Spanish settlers. A number of these animals must have strayed from their owners, for, by the time of the Civil War, vast herds of "wild cows" or "mavericks" roamed the Texas plains. It was in this environment that the cattle business and the cowboy got their start.

The first cowboys' job was to herd and corral wild cows, which according to history as well as fiction were wilder than any buffalo or deer. To corral them required both ingenuity and courage. Various devices were used. Some were decoyed into corrals by gentle herds; some were lassoed; some had to be thrown and hog tied. Captured animals were usually tied neck to neck with gentle ones, and thus towed into the corral.

At many times during these operations, the cowboy virtually placed his life in the hands of chance, for if he failed to secure a thrown animal swiftly, it became a case of six-shooter against long vicious horns, with the outcome often in doubt.

By 1860, taxes were paid in Texas on 3,786,443 head of cattle. These were all branded or corralled animals; it was impossible to estimate the countless thousands that roamed the ranges uncounted. At that time the population of the state was 604,000 persons of all races. A ratio thus existed of six head to each person. At the same time, in the nation at large, the ratio of cattle to persons was only 81 to 100, with extreme shortages in the east and New England. Texas had a market for its cattle. The business began to flourish and thereafter never flagged.

Even though it is of more recent development than beef production, no offshoot of the cattle industry is more promising for Texans than dairying. Rapid increase in urban populations has greatly speeded its growth. As early as 1930, this branch of the industry had attained significant proportions, with a production of over 400 million gallons of fluid milk for the year. Processed from this were 25,083,000 pounds of creamery butter, 3,078,000 pounds of cheese, 1,024,000 pounds of condensed milk, 6,829,000 pounds of evaporated milk and 4,832,000 gallons of ice cream.

Industrial growth and improvement of transporting and marketing facilities since that year have contributed to further expansion, and the year 1944 saw production reach 30,938,000 pounds of creamery butter, 19,585,000 pounds of cheese, 20,970,000 pounds of condensed milk, 38,019,000 pounds of evaporated milk and 22,079,000 gallons of ice cream.

The establishment of a number of additional milk processing plants in the state has given added importance to the industry and has had much to do with the progressive development of breeds of milch cows noted for their milk productiveness. Texas ranks high among the states in the number and quality of milch cows and in output of dairy products. For a number of years it has been within the group of the ten leading states. Total income from dairy products in 1944 amounted to \$94,360,000.

Rapid progress has been made in recent years in breed improvement of both beef and dairy cattle. The Hereford has come to be the leading beef animal, and entries of this breed in national stock shows habitually take many prizes. In the dairy industry, the Jersey, Holstein and Guernsey are the favorite breeds.

An interesting feature in the development of breeds occurred many years ago with the introduction of the Brahman, native cow of India, by ranches along the Texas coastal region. These animals proved highly resistant to ticks and other infestation thanks to very short hair; thick, tough hide; and a waxy secretion of the skin. Upon being crossed with short horn stock which at the time also was being given considerable attention, the Brahman developed into a very successful breed.

Nothing attests more significantly to Texan interest in cattle and cattle products than the livestock shows

which are held annually throughout the state. These are important and festive events. Impressive purses and premiums are awarded to winning entries, and the exhibitions are glamorized by superlative entertainment consisting of rodeos, arena events, matinees and similar attractions.

A department of these expositions that is said to have done as much as anything else to encourage the raising of more and better beef and dairy cattle is the feature known as the Calf Scramble. For this event, young calves are donated by business and professional men, and 4-H and FFA boys engage in a contest to catch and halter them. Each successful contestant gains ownership of the calf he catches. Now going into their fourth year, these contests are reputed not only to have helped start the boys on successful cattle raising careers, but also to have made livestock enthusiasts of the professional and business-men acting as donors.

Horse shows are nearly always an interesting feature of these livestock expositions. Interest in these attractions is almost as high as it was in the days when horse performance was the leading feature of nearly all fairs and rural exhibitions. In some sections of the state, in fact, they enjoy such prestige as to be held as separate and distinct events.

The raising of horses and mules, while of secondary importance in comparison with cattle, is by no means an insignificant industry. Horses have ever been linked closely with the history of Texas, if for no other reason than their indispensability in cattle raising. At one time, the marketing of horstock brought in a substantial portion of Texan income. Even today, the value of these animals now existing maintains a noteworthy standing. Polo mounts,

Big Stockyards at Fort Worth, Leading Southern Cattle Center.





Texas is the Leading Mohair Producer.

mules, ponies of various breeds and horses were valued at close to \$50 million for 1945. Last census showed 559,000 head of horsetock and 372,000 mules.

Important adjuncts to livestock resources are sheep, goats, poultry and hogs.

In number of sheep and value of mutton and wool, Texas leads the nation by a wide margin. Its more than ten million head are only distantly rivaled in number by sheep populations of Montana and Wyoming, each of which states has somewhat over three million head.

A similar ranking is held for goats and mohair.

Texas income from wool in 1944 amounted to \$34,477,000 and from mohair, \$11,102,000. A total of 10,465,000 sheep were shorn and 3,570,000 goats clipped.

The raising of poultry has made rapid strides during recent years. A number of well recognized poultry shows are held each year in the state, and increasing interest in improved strains has led to development of a variety of fowls noteworthy for both meat bearing and egg producing excellence. Thoroughbred Texas chickens bring unusual prices, one capon having been known to be sold for \$1,000.

Runners-up to chickens as poultry income producers, turkeys are making an especially good showing. Texas is now the leading turkey state of the nation and Cuero, Texas celebrates this distinction by a well known annual event, the "Turkey Trot," which attracts sizable crowds each year.

Income from poultry and poultry products during 1944 totaled \$113,860,000.

Hogs had an early part in Texas economy. In the beginning they furnished a goodly portion of pioneer diet. Since those early days, breed improvement has been noteworthy. Today, the hog industry in Texas is substantial. Pigs and hogs in the state in 1945 numbered 2,019,000 and were valued at \$32,182,000. Cash income from this source in 1944 was \$68,061,000.

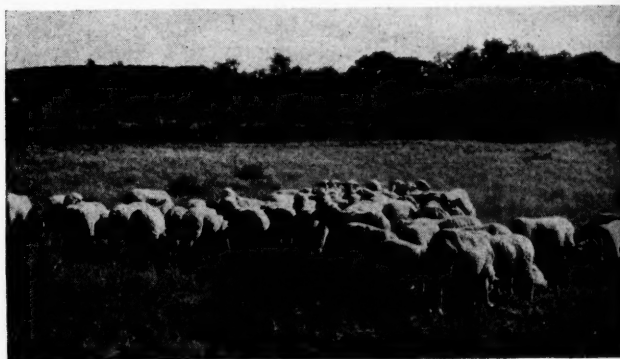
Infrequently mentioned but worthy of notice is a widespread bee and honey industry in Texas that contributes to live creature production. The state ranks well up near the top in honey output, and while most of this product in the past has gone for home consumption, there is a noticeable trend toward com-

mercial production for interstate shipment. One of the most valuable features of Texas honey is contributed by those sections to which cat's claw, mesquite and guajilla blossoms are native. These growths contribute a flavor that is distinctive and unmatched elsewhere. By far the largest part of the production comes, however, from the cotton blossom which is almost statewide in distribution. Due to the large cotton acreage and prolixity of flowering growth, honey production holds notable potentialities.

Another Texas live creature industry which deserves mention is silk culture. It is not yet two years since Texas business men sponsored a silk producing enterprise at Mineral Wells. Today between one and a half and two million silkworms are feeding on an orchard of over 60,000 mulberry trees set out in 1944. Automatic reeling machinery, far surpassing the speed of Japanese hand-reeling methods, has been installed, and negotiations are reported pending for an important processing establishment to convert the product of this infant industry into finished materials.

The pursuits involving bees and silkworms may not seem very great when compared with the all-important cattle industry, but they do serve to illustrate the additional possibilities that are to be found in Texas, and also the vigor with which Texans reach out for additional activities. Their further development will fit in well with the picture projected from the past.

Sheep Grazing in Texas.





Long Leaf Pine.



Many persons doubtless will think of Texas as a vast, flat area, without any trees worth mentioning. This is far from true. Despite its magnificent wide open spaces, the Lone Star state has notable forested areas. At one time indeed it had eighteen million acres of excellent virgin forests, and as many more of very good, though less pretentious, woodland. This is a greater acreage of forests than most of the states in the Union could boast of in their infancy.

Of the ordinary wooded areas in Texas, most remain as they were in the beginning—probably seventeen million acres scattered here and there on farms and ranches throughout the state. Of the virgin timber, most has been cut, and most of the original stock put to commercial use has been replaced by second-growth trees. Today, one of the greatest natural resources of the state remains in its forests, the major belt of which, in the eastern part of the state, alone covers eleven million acres. The trees in that belt are largely representative of southern Atlantic slope types and consist principally of southern pines and hardwoods. The forests of East Texas represent the western extension and terminus of the Gulf Timber Belt. Nearly two million acres are still of virgin stock.

As the soils and climate gradate westward into types best known to the west, the timber growth changes also; in the extreme western sector the prevailing species are western yellow pine and Douglas fir, representative of the Pacific coast, and mesquite, a sub-tropical type from Mexico. In timber, as in most other respects, Texas partakes of the influence of both the South and West, with Southern influence predominating.

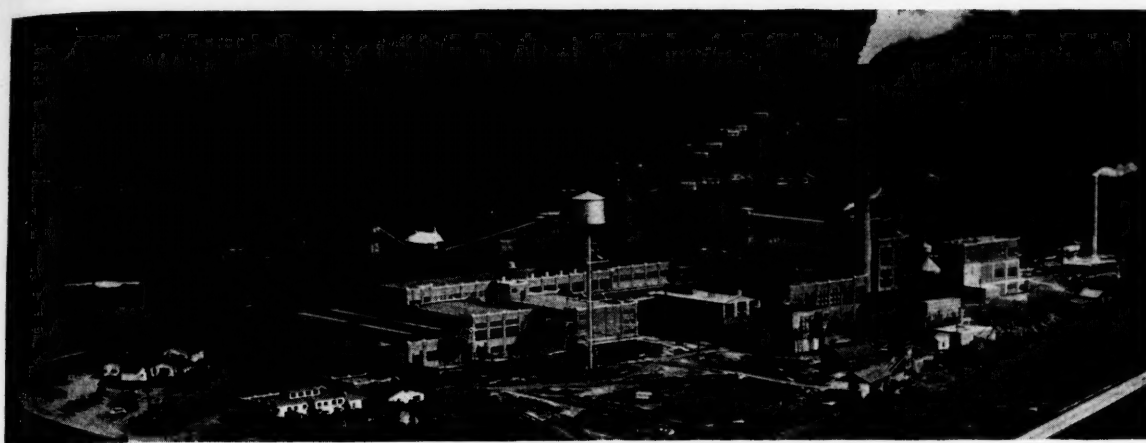
In the great eastern timber belt, three forest areas stand out rather distinctly. To the south and bordering the coastal plain is a region composed mostly of mixed oak and loblolly pine. It covers about 7,000 square miles, and its east-west borders are roughly the Sabine and Brazos rivers. Its northern border makes contact with a second, or middle region in which long-leaf pine predominates. The long-leaf region spreads out over approximately 5,000 square miles, with the Sabine and Trinity as its east-west borders. Important lumber industries are located in this area. The third and largest forest area, made up mostly of short-leaf pine, with an admixture of hardwoods, blankets the northeastern counties of the state. It extends over 25,000 or more square miles.

The first and most southerly area, the loblolly belt, tapers off into open prairie where it edges into the coastal section of the central prairies. As the prairie extends northward and westward, however, patches of woodland timber begin to dot the open land with the appearance of sandy soils, and these patches become even larger and denser until they merge into an integrated woodland area of the Eastern cross timbers. In the higher ground north of the loblolly belt, longleaf pines, with their long taproots, have reached deeply into the better-drained soil to draw the nourishment necessary for great height and density of growth. The widespread shortleaf forests on the north have been extensively cut over, and second growth trees furnish the basis for existing forest industries. These second growths, however, have established good records for rapidity of growth and excellent quality when mature.

Hardwoods are interspersed with the pines of all three areas, with upland hardwoods covering some million and a half acres all told, and bottomland nearly two million acres. The bottomlands of the Sabine, Neches, Trinity, Angelina and San Jacinto rivers have thick growths of hardwoods of many kinds, including 50 or more species. Oak, red and black gum, magnolia, ash, basswood, hickory, tupelo, sycamore, cottonwood, maple and cypress are especially abundant in these fertile valleys. The wide bottomlands of the larger creeks are also well wooded with hardwoods; some of the creek valleys attain widths of up to five miles.

Where the virgin timber has been removed from these bottomlands, there has sprung up an abundant growth of replacement stock, comprising practically every variety known to the Atlantic slope, all of which indicate promise of swift maturity. Texans show that they are aware of the possibilities of their forests and plant many thousands of seedling trees each year in cut-over areas. Many wood working industries, including the processing of pulp, have been established in and near the forested territory, and these give impetus to conservation and reforestation efforts.

While the coastal plain as a whole is mostly open country, limited areas of swamp and bottomland forests are to be found at frequent intervals. These patches are most frequent along the lower Sabine and Neches rivers. Tupelo and cypress are the most prevalent varieties in these sections, but water oak, water



South's Only Newsprint Mill, Lufkin.

ash, swamp maple, magnolia, red and black gum and hickory also present good stands.

Despite its vast acreage and stumpage still standing, the great East-Texas timber belt does not present the same unbroken mass of forest that the early pioneers found. In many sections cleared spaces now break into the solid block woodland, and grass and crops grow where trees formerly stood. Many sections are now combined agricultural, grazing and timbered areas, with mutual interests and mutual advantages. Of the twenty-one million acres in the forty-odd eastern counties, only two-thirds of the land area remains in virgin and second growth forests. Fully one-third has been improved and given over to agricultural pursuits. Most woodland areas in the north-eastern sector have become part of farms, and the trend is constantly toward ownership in smaller and smaller holdings. This tends to increase the watchfulness and care with which preservation and reforestation are practiced and bodes well for future maintenance of this important natural resource. Reports for 1944 show six and a half million acres of the merchantable timberland now to be in the hands of holders of less than 300 acres each.

Timber growth in the state tapers off as it moves westward. Most of the commercial operations involving forest products are confined to the eastern section. Tree growth farther west is substantial, however, and important. Wood products in a variety of forms are being utilized in the advanced methods of farming and stock raising. The cedar brake area in the south central sector is especially important. Posts, poles and certain types of building materials are harvested from this section in substantial quantities. Annual value of such products is reported to top \$1 million. As elsewhere, the tree growth there is also important as protection against erosion of soil. In consequence heavy rainfalls are easily absorbed and methodically converted into valuable spring and irrigation water. Northward of the cedar brakes lie vast post oak and black jack acreages.

In the more level stretches of the central zone, live oaks prevail, frequently in dense stands. Scatteringly blended with these, mesquite too begins to put in an appearance. This tree of the semi-arid west is not

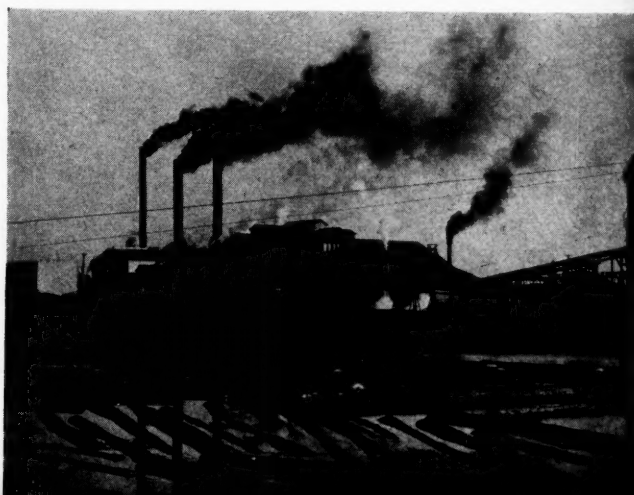
without its own valuable qualifications. Under favorable conditions it attains size suitable for saw lumber and building supplies; as fence post material it is a good running mate for post oak and cedar. Millions of such posts encircle countless acres of West-Texas grasslands.

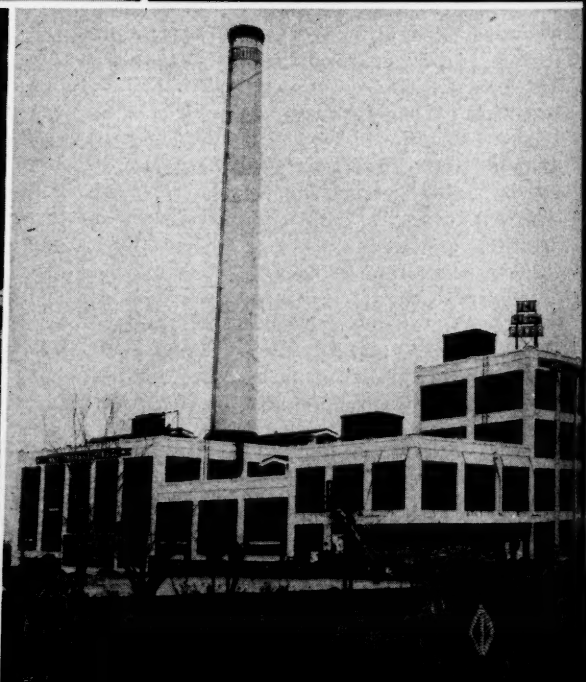
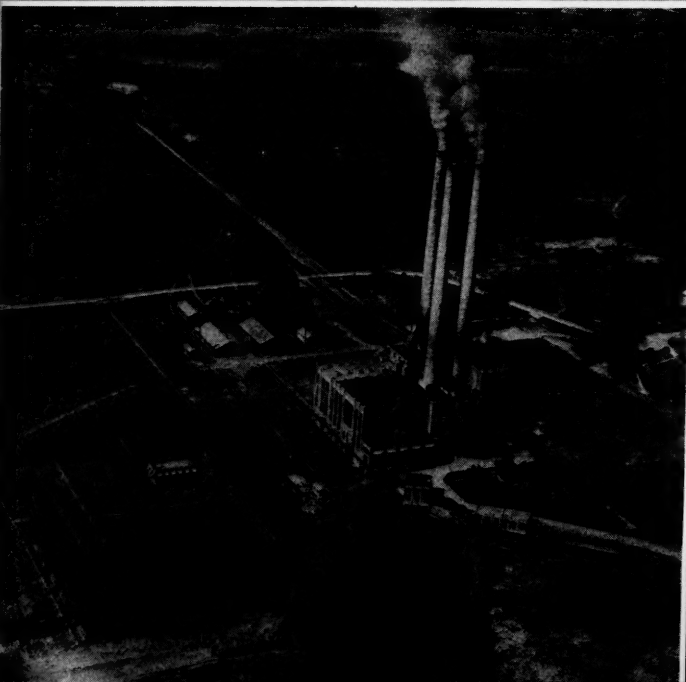
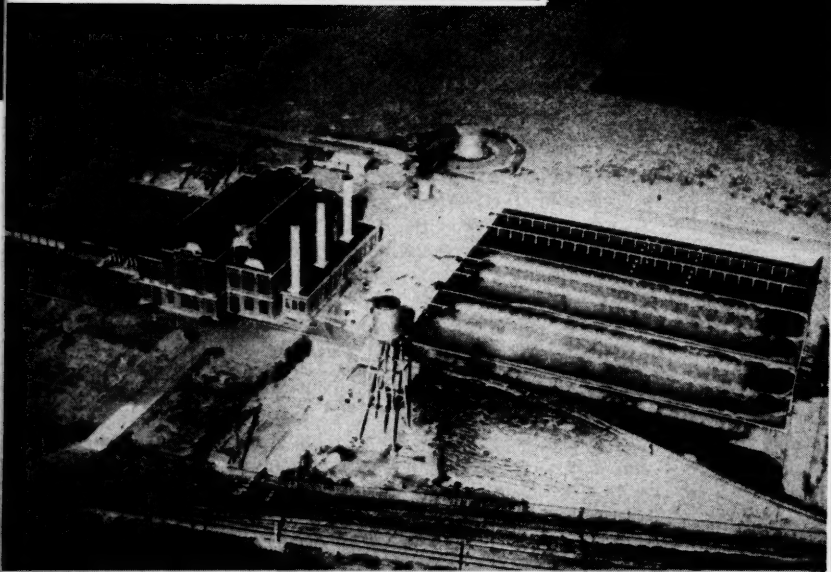
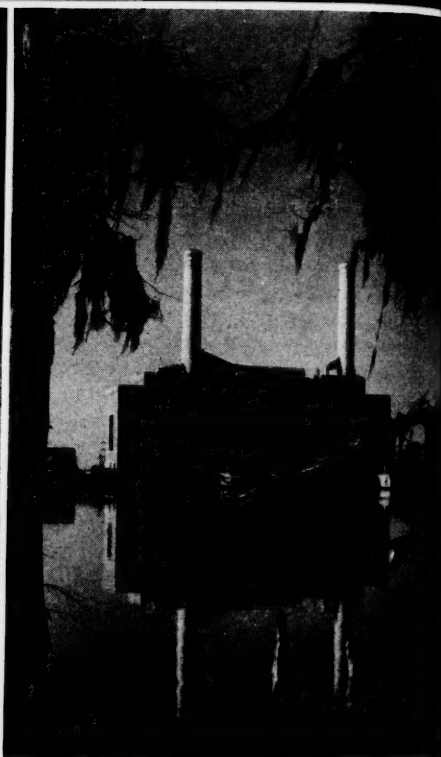
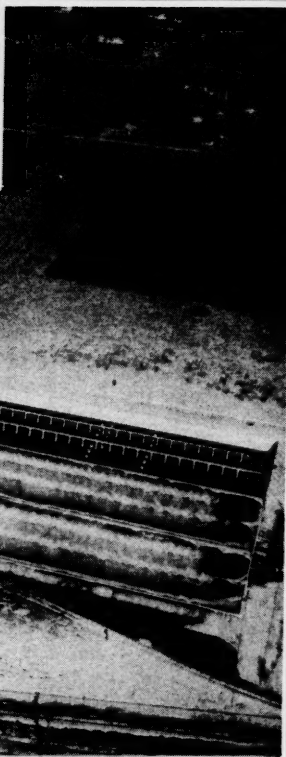
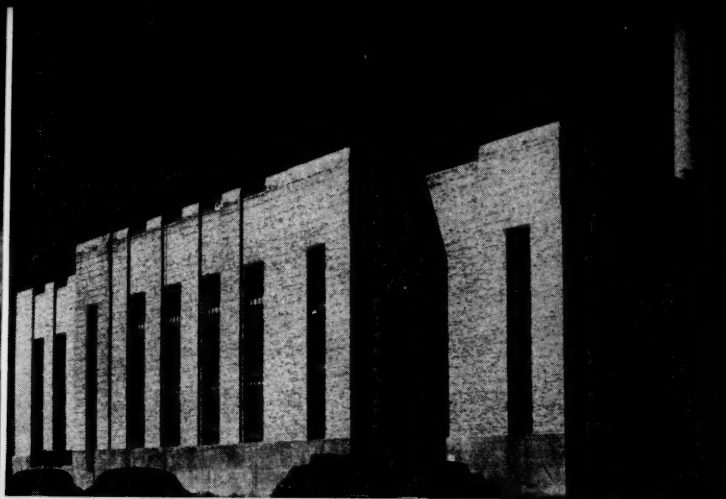
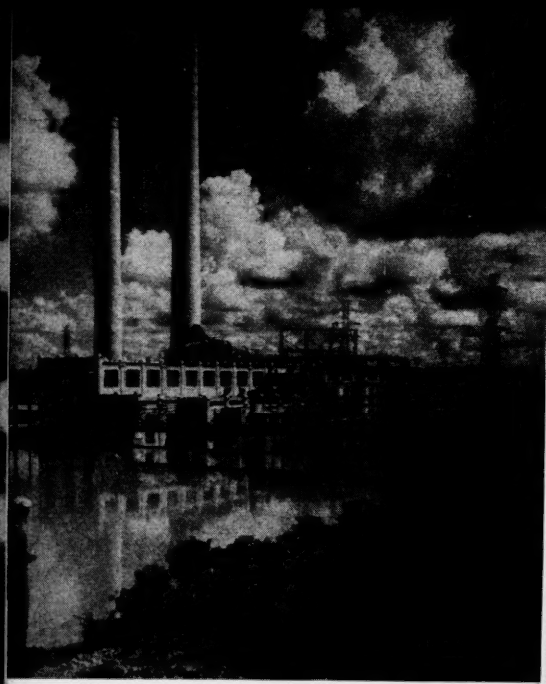
Passing from the central zone, and across the Pecos River, into the Trans-Pecos, one encounters an entirely different tree growth. There the slopes of the hills are covered with live oak, and the mountain slopes are dotted with growth indigenous to the Pacific slope. The trees there appear in clumps, rather than solid forests, and represented among others are western yellow pine, Douglas fir and Arizona cypress. Present also are cedars, high altitude oak and other mountain varieties common to the far west.

Of the three types of Texas vegetation, agricultural growth, grassland and forests, the last should not be dismissed lightly. In its own right it is vastly important, and in relation to the other two, almost invaluable. Twenty-eight billion board feet of merchantable saw timber still stands, to say nothing of the myriads of cords of small growth and tree tops adaptable to fuel, pulpwood and chemical purposes.

To conserve its forests, the state legislature provided for appointment of a State Forester as early as 1915. In 1926 the forest service became one of the four main divisions of A. & M. College of Texas.

Texas Lumber Mill.





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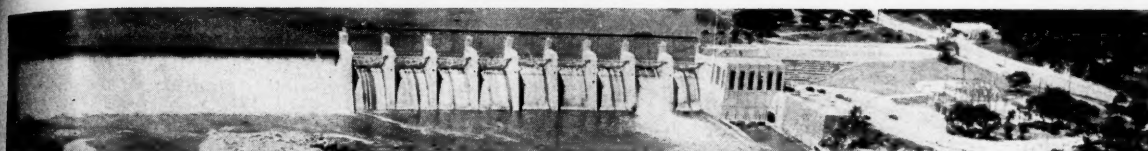
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Texas Hydroelectric Dam.



Electric power output in Texas has more than trebled since 1935. This large increase has resulted primarily from the necessity of keeping pace with normal industrial expansion, which likewise has made impressive gains.

The exigencies of war found the state well equipped to meet peak loads imposed by emergency industries. Even after these were adequately supplied, a ten to fifteen per cent surplus was left available for out-of-state transmission. It was not found necessary to restrict any user of power in Texas during any of the war years.

At the beginning of the present century, the status of power capacity and utilization was limited to small plants and restricted areas. The predominating fuels then were coal and lignite, and steam was the prime mover of the industrial machine. From a meager rating of just over 100,000 horsepower, the power capacity of the state has been multiplied by generating installations almost twenty-fold to a total of 1,949,000 horsepower.

The first power transmission line was constructed in 1912. Today there are over 20,000 miles of high voltage lines crisscrossing the state, serving nearly 2,000 communities and connecting with systems in other states. To these could be added something like 15,000 miles of intra-urban utility wires radiating from high-voltage sub-stations or from local plants.

Interconnections, coordination of operating methods and other measures looking toward cooperative efficiency had much to do with the achievement of wartime adequacy. These hold equal promise for future peacetime usefulness. Remarkable harmony exists between privately-owned and publicly-operated utilities.

Private interests own 74 per cent of the generating capacity of the state; public projects, 26 per cent. The public projects are all state or municipally-controlled.

Of the privately owned utilities, 1944 reports showed twelve to be hydro-generating plants with capacity of well over 30,000 kilowatts; 46 steam plants with combined capacity of over 1,000,000 kilowatts; and 85 internal combustion plants, over 50,000 kilowatts.

Fifteen publicly-operated hydro plants were reported to have combined capacity of nearly 180,000 kilowatts; seven steam plants, around 150,000 kilowatts; and 37 internal combustion plants, around 50,000 kilowatts.

Total capacity for the state in 1944 was shown as in excess of 1,400,000 kilowatts.

Recent reports from the industry indicate that substantial additions to facilities since that year have brought total capacity to approximately 2,000,000 kilowatts.

Most of the larger hydroelectric projects are state-sponsored, inasmuch as their cost must be justified by other factors than power output alone. Part of their cost is borne by water conservation and flood control projects, enterprises that are difficult for private companies to handle.

Hydroelectric programs now in operation include those of Texas Hydroelectric Corporation, Guadalupe Power Company and Central Power & Light Company, operating plants on the Guadalupe River; Central Power & Light Company, on Devil's River; Central Power & Light Company, on the Rio Grande; Lower Colorado River Authority, on the Colorado River; Possum Kingdom, on the Brazos River; and Denison Dam, on the Red River. Additional sites for further developments have been chosen at Tanyard, Granite Shoals, Marble Falls and several locations between Austin and Columbus, all on the Colorado River and its tributaries; New Braunfels on the Guadalupe; several locations in the Big Bend of the Rio Grande; a location near Rockland on the Neches River; and twelve additional sites on the Brazos River and adjacent waters.

All of the larger privately-owned power companies and a number of the smaller ones, maintain industrial development departments whose functions assist manufacturers in finding advantageous locations for new operations. These keep on file detailed information of available plant sites, local labor supplies, transportation facilities, water supplies, climate, tax rates, raw materials, markets and other factors vital in the selection of new factory sites.

Supplying, as they do, three-fourths of the power used in the state, Texas private power firms are recognized as performing an unusually efficient service. Much of the phenomenal growth that has come to the industry since the turn of the century can be traced to their zeal and energy displayed not only in keeping abreast of industrial development but slightly ahead of it.

Preceding Page—Six Big Texas Power Plants. At the Upper Left is the Texas Electric Service plant, near Eastland; Upper Right, Nueces Bay Station, Central Power & Light Co.; Middle Left, Southwestern Public Service Plant, Amarillo; Middle Right, Neches Station, Gulf States Utilities Co.; Lower Left, Trinidad Plant, Texas Power & Light Co.; Lower Right, Abilene Plant, West Texas Utilities Co.



TRANSPORTATION

From the standpoint of transportation facilities, the Texas of today, with its over 23,000 miles of rails, an equally great stretch of motor roads, an unusual number of flourishing harbors and a swiftly growing airway service, is in marked contrast to the region of earlier days.

The first pioneers came overland through almost trackless forests, infested with predatory animals and savage aborigines; or braved undeveloped harbors and undredged rivers to make landings. Many perished in the attempt.

By the middle of the nineteenth century, however, Texans were inaugurating an era of railroads and other traffic facilities destined to become outstanding for their mileage and efficiency.

The actual beginning of railroad construction took place in 1851, and a number of arrangements and charters had been made even much earlier. In that year was started the building of the Buffalo Bayou, Brazos & Colorado Railway, the first line in Texas to hear the snort of the "Iron Horse" as steam engines were then known. By 1860 trackage had been completed by this line between Harrisburg and Alley-

ton. In the meantime construction was started for other lines, some fifty of which had been chartered up to that time.

The second railroad to begin construction was the Galveston & Red River Railway, later to have its name changed to Houston and Texas Central, and still later to become part of the Southern Pacific system. Construction, northward from Houston, began in 1856. Grading was done with plows and harrows. The rails, imported from England, weighed 54 pounds to the yard. By 1860 this road had been extended to Millican, eighty miles from Houston.

Railroad building was suspended for the term of the Civil War but the end of hostilities found the enterprise beginning anew. In 1872, an out-of-state line, Missouri, Kansas and Texas, known as the Katy, entered the state from the north at Denison. About ten years later, the Southern Pacific, building westward across the state, reached El Paso, and the Texas and Pacific was not much later arriving at the same destination in a similar enterprise. Meanwhile, the International and Great Northern was building northward from the Rio Grande to the Red River

to cross the state in a transverse direction.

Retention of its public lands by terms of admission to the Union greatly aided the state in getting railroads. Grants of land were freely made to railroad builders and, by 1890, as many as 8,700 miles of track had been laid. The Texas transportation system was then assuming the substantial proportions which were to characterize it from that time on. Up to that time, forty-one railroads had been accorded a total of 24,453,000 acres of state lands, an area as large as the state of West Virginia.

In 1891 the Texas state legislature passed a law creating a railroad commission of three members to adopt intra-state rates and administer transportation laws. That body, changed only from appointive to elective status, has functioned without intermission since its inception. It now regulates the activities of more than one hundred railroads in Texas, with the greatest trackage of all the forty-eight states. Many of these railroads are parts of ten large railway systems that have a total of eight-one affiliated companies. These systems are Burlington, Frisco, Kansas City Southern, Katy, Missouri Pacific, Texas & Pacific, Rock Island, Santa Fe, Southern Pacific and Cotton Belt. In addition there are twenty-two unaffiliated companies operating in the state. Of the over 23,000 miles of trackage in state, 17,139 miles are main line tracks.

In 1944, total carload freight originating in Texas amounted to 63,796,975 tons; freight terminating in the state, 39,770,768 tons.

Highways

At the same time they were making records in railroad building Texans were pressing highway construction. For this there was urgent need. Three hundred years of Spanish domination had produced only one route of travel that had become sufficiently demarcated to be designated by name. Portions of that one route, the now famous El Camino Real, today consists of a smooth ribbon of concrete traversing the state and reaching beyond. In the beginning it was scarcely more than a trail and it is said that at its eastern terminus stood a sign which warned: "Choose Your Rut With Care—You Will Be In It For 500 Miles."

During all the time it was a republic, Texas made very real and not entirely futile efforts to improve its roads and harbors. The bays and inlets were surveyed; plans were drawn for harbor construction; some rivers were dredged; some surfaced roads were built. Other roads were merely cleared, one of the road contracts of the time specifying among other things that the highway should be 30 feet wide and free of stumps projecting over 12 inches high.

At the beginning of the Civil War, most of the rivers were usefully navigable, and roads of one kind or another had been projected into practically every section. Population had then passed the half-million mark and the counties had assumed a portion of the road building responsibility. Stage lines had been established between the principal communities. Passenger rates on these have been estimated to average



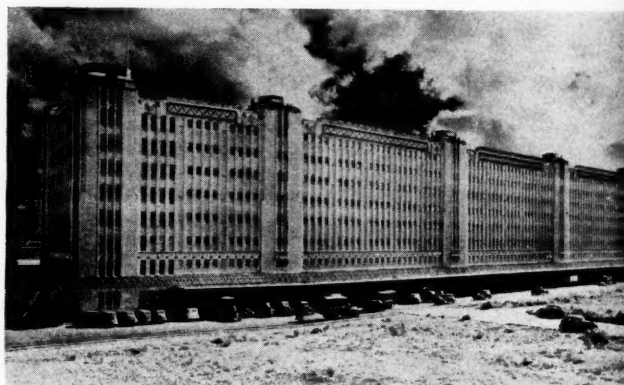
Corpus Christi Bus on a Texas Highway.

ten cents a mile. Records of 1860 show that there were thirty-one such stage routes in service.

By that time also, through routes had been established from Texas points to St. Louis, New Orleans and even San Francisco, to which last point a trip from West Texas consumed four to five weeks for passengers and much longer for freight. Freight rates ran about one dollar per hundred pounds per hundred miles.

An interesting sidelight on the transportation situation of those days is presented in records of an experimental introduction of a number of camels from East Asia. These were brought in for the purpose of transferring soldiers from place to place in the southwest. The results were none too successful, for the experiment had short life. The camels were put to another use, however—that of helping to build roads across the desert stretches that separated Texas

A Large Texas Warehouse.





Turning Basin End of Houston Ship Channel.

from California. In that enterprise they are recorded to have performed valuable service.

Road building progressed steadily after the Civil War, and received increased impetus in 1917 when the State Highway Department was created by the Legislature and put into operation. Since that time, construction and maintenance of all highways in the state have been under the direction of that body and an enviable record has been made in improvement and extension of the highway system.

Over this system, nearly one hundred motor bus lines now operate, covering a total of more than 21,000 route miles. These link all the principal centers of population with each other and with all minor points in the state as well.

In addition to good paving the state has become known for its excellent bridges and for the elimination of railroad grade crossings. Well over a thousand grade crossings have been eliminated since the Highway Department took over jurisdiction. Noteworthy service also has been performed by the roadside improvement division of the Department which was inaugurated in 1933. Existing growth along roadsides has been nurtured and preserved, and new vegetation has been set out in barren spots. Over two million young sprouts from stumps of trees cut away before the program got under way have been preserved, and the nearly half a million full grown trees in the right-of-ways have been cultivated and nourished.

While the planting of roadsides has the additional effect of beautifying the landscape, the primary purpose is to serve as a safety measure. This is achieved by placing plants where they will accentuate the

presence of curves, bridges, hilltops and other motor-ing hazards. Over a million trees, shrubs and vines have been set out for the purpose. Supplementing these, tons and tons of flower and grass seed have been sowed to retard erosion. Furthermore, despite the emphasis on safety and conservation, convenience and pleasure have not been ignored. Many hundreds of roadside parks have been established along the highways.

For the near future, the Highway Department has important plans. In addition to its usual program it will have \$25 million in especially appropriated funds for gigantic freeway construction projects. These freeways will be multiple lane roads, free from grade intersections and built to permit high speeds. They will link the principal cities of the state in a super-speedway system which is heralded as one of the most progressive in a long chain of progressive highway improvements.

Ports and Harbors

Visualizing the opportunities promised by maritime transportation, Texas early took steps toward developing harbor facilities.

With its nearly four hundred miles of coastline fronting on the Gulf of Mexico, the state has been able to make such progress in this direction that it now has within its borders headquarters for four Federal customs districts; the Galveston District, taking in Houston, Galveston and Texas City; the Laredo District, including Corpus Christi, Laredo, San Antonio, Brownsville and Eagle Pass; the Sabine District of

Port Arthur, Sabine, Beaumont, Orange and Lake Charles (La.); and the El Paso District. Exports through these ports in 1944 totaled \$515,000,000; imports, \$155,000,000.

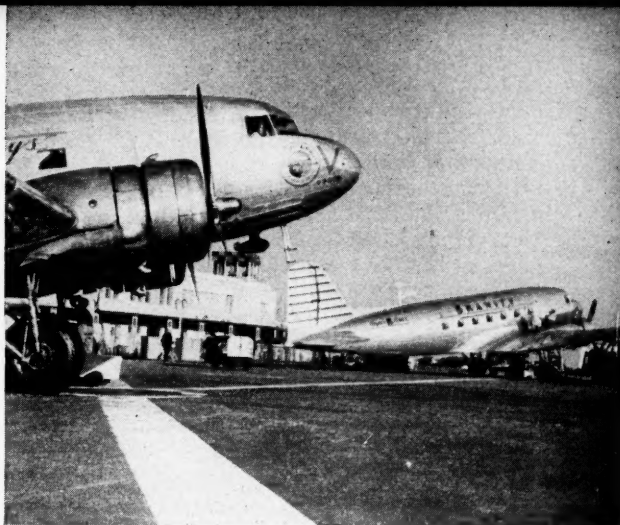
It was in 1896 that plans and surveys for modernization of these ports made in earlier years, began to materialize. In that year a jetty system costing \$3 million, and built of huge Texas granite boulders, was extended five miles into the Gulf of Mexico from the Port of Galveston. By 1901, Beaumont had made preliminary arrangements for docking deep-sea vessels, and Houston had started its project of bringing the waters of the Gulf to its doors via a 55-mile channel dredged through Galveston Bay, Buffalo Bayou and the San Jacinto River. Houston completed its project in 1915; Beaumont in 1916. Corpus Christi established deep-water shipping facilities in 1926; Brownsville, in 1936. The remainder of present-day harbors followed in swift order.

Many of the ports of Texas have been connected with the Mississippi-Ohio waterway network by the Intracoastal Canal, an important inland channel finished in 1933. The completion of this project opened up for Texas shipping a waterway transportation system reaching to many of the principal trading centers of the United States. It is planned that ultimately all Texas ports will be linked up by this great inland waterway network.

Shipments through most Texas ports are of a widely diversified nature. Cotton, petroleum, livestock and the products of each pass in vast volume through these harbors annually. Supplementing these are substantial shipments of vegetable products, ores and metals, timber products and rice. Imports are almost without limit as to diversity.

In addition to the ports officially listed as components of the Federal customs districts, several Texas harbors are important for their special types of exports. Freeport is the largest exporter of sulphur in the world. Port Aransas is a large exporter of petroleum and its derivatives. Large tonnages of citrus and truck crops pass through Port Isabel. Port Neches is part of the Sabine network.

Engaged almost exclusively in handling war materials during the past few years, the facilities of the ports of Texas have been maintained in good repair.



Planes Operating from Love Field, Dallas.

In addition, many of the harbor channels have been deepened and widened. Others are now being improved. Reports from all districts announce swiftly expanding volumes of peacetime traffic and high hopes for unprecedented growth in the future ahead.

Airways

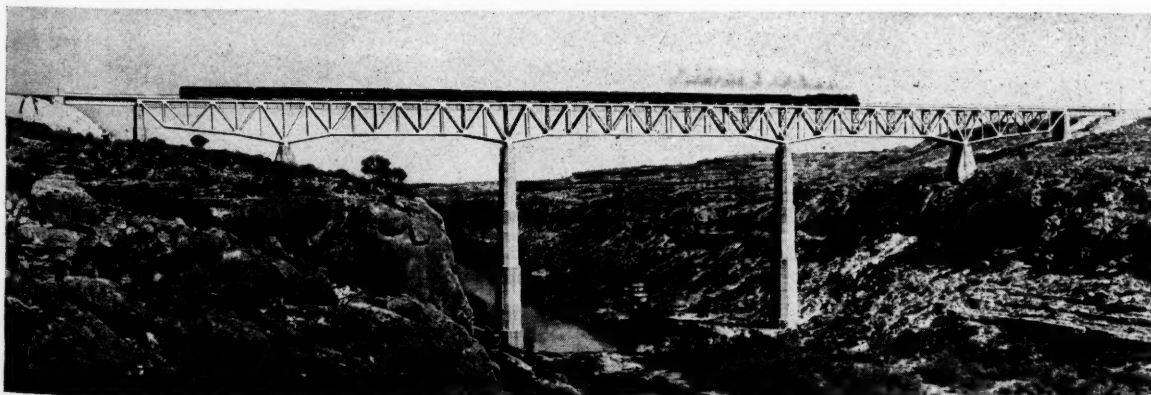
Texas has displayed noteworthy leadership in aviation.

This is evidenced by the military records of two world wars as well as by the present high stage of commercial airway development.

Military tacticians in World War I were quick to see the smooth-flying advantages offered by Texas' cloud-free skies and favorable terrain. More flying fighters were trained for that conflict in Texas than in any other state. Randolph Field became known as the Army's West Point of the Air.

Between the wars, private enterprise, enlightened by what had been accomplished in military aviation, went to work on commercial flying in earnest. By the time of World War II, airway transportation had made such progress that there was no difficulty in

High Bridge Over a Texas Canyon.



duplicating the leadership enjoyed in the other war, and this time private enterprise was able to add its contribution to that of the armed forces.

Official reports, issued since the end of the war, indicate that Texas is carrying its wartime leadership in aviation over into the peacetime era. Its 389 airports, as of May 1, 1946, are more than are recorded for any other state. Some of these are still being used by the armed forces, and a few will undoubtedly remain in their hands permanently, but the overwhelming majority will be used for peacetime commercial transportation.

Airports now in operation in the state consist of 142 commercial, 106 municipal, 22 CAA emergency fields, 2 municipal, now used by the Navy, 34 municipal now used by the Army, 20 Navy-owned, 45 Army-owned, 6 miscellaneous government for forest conservation and similar purposes, and 12 private flying fields.

The 142 airports now being used for strictly commercial transportation are well distributed throughout the state and contribute to either direct or connecting-line service to all parts of the United States and to other countries.

Nine certified airlines serve the state. At least two of these are through lines from coast to coast. Two offer gateway service into Mexico and other Latin American countries. All furnish convenient air service, westward, eastward or northward to the important population centers of the United States.

Airway certification by the Civil Aeronautics Administration for 141 cities and towns is already in effect. Some of these points have more than one designated airport, the total of the latter being 175 for the state. Applications for service to 231 other points are now being reviewed by the CAA. These new applications primarily seek local, feeder or connecting-line service in which there is considerable interest because

of the wide dispersment of population centers. If all these applications are granted, which seems likely, the state will substantially increase its leadership over other states in airway facilities.

To supplement this leadership, Texas is well equipped with trained personnel. At the close of 1945 there were more than 1,800 civilian aircraft, certified for activity, in the state, a number greater than for any other state. There were 8,496 licensed pilots, the second highest number in the nation.

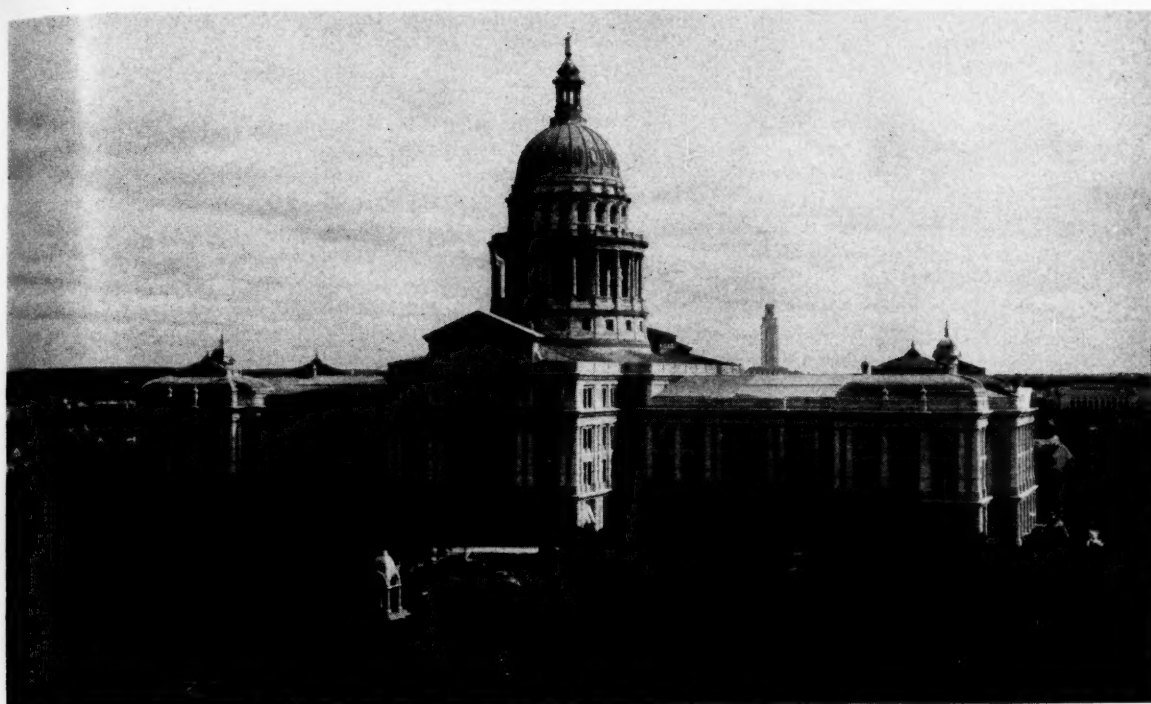
Taking advantage of the opportunity presented by recently-passed federal legislation to aid in airway development, 123 existing Texas airports are scheduled for enlargement or improvement, the costs of which will aggregate more than \$52 million. New airports to the number of 213 are to be built.

Breakdown of this tonnage with respect to commodities is not available for 1944, but comparison as between commodities transported to or from Texas may be seen in the Railroad Commission report for the year 1942. In that year shipments included: wheat, 60,725 carloads; corn, oats, rice, other grain, 71,169 carloads; wheat flour, 41,198; other mill products, 78,634; cotton and lint, 133,317; cottonseed including meal and cake, 25,140; citrus and other fresh fruits and vegetables, 471,500; miscellaneous agricultural products, 77,475; horses, mules, ponies, 3,027; cattle and calves, 114,521; sheep and goats, 19,875; hogs, 8,741; packinghouse meat, 33,621; poultry and dairy products, 8,888; wool, 15,949; other animal products, 19,355; products of mines, 805,645; forest products, 269,405; and manufactured products, 2,211,986 carloads.

There is one common carrier electric railway in Texas, Texas Electric Railway Company, which operates 173 miles of track from Dallas to Denison northward, and from Dallas to Waco southward.

Lancaster Yards at Fort Worth.





Texas State Capitol at Austin.

GOVERNMENT

The State Government of Texas is administered by an executive division consisting of more than 100 departments, at the head of which stands the Governor.

The legislature is made up of two branches: a Senate of 31 members and House of Representatives of 150 members.

The judiciary consists of a Supreme Court, a Court of Criminal Appeals, eleven courts of Civil Appeals, and more than 100 District Courts.

The Constitution of Texas is nearly six times as long as that of the United States. A reading of it leaves one with the impression that its framers were determined to leave no stone unturned in safeguarding the principles of individual liberty, regardless of the amount of ground that had to be covered. As is inevitable with documents of such length, many amendments were necessary, and more than half of the original structure has been altered by changes that run the gamut from minor detail to important transformation. The original purpose, however, has been strengthened rather than weakened by these changes.

The Governor, along with a Lieutenant Governor, Attorney General, Comptroller of Public Accounts, Treasurer, Commissioner of Agriculture, Commissioner of the General Land Office, and Superintendent of Public Instruction, are elected for two-year terms. The three members of the Railroad Commission are elected for six-year overlapping terms. The Secre-

tary of State is the only constitutionally provided official who is appointed by the Governor, by and with the consent of the Senate. Most of the remaining department heads are named in the same manner. In some instances, however, important officials are named by commissions that hold office through appointment or election. Among these is the State Highway Engineer, who is appointed by the Highway Commission.

The State is divided into 254 counties, each with its own local administrative government. Each county has a Commissioners' Court, consisting of four commissioners elected from individual precincts, and an elective County Judge. All of the important county officials are elective, including Sheriff, Assessor, Collector of Taxes, County Clerk, County Attorney, County Treasurer and County School Superintendent.

The rapid growth of cities and towns has made municipal government a matter of increasing importance. Communities of 5,000 inhabitants or over are permitted to govern themselves under a home-rule charter. Smaller communities fall under the general laws of the state.

Forms of city government vary considerably between the different communities. Variations of the commission form are most prevalent, although the popularity of the manager or commission-manager type is a comparatively recent development.

In 1933, a constitutional amendment was adopted to authorize joint city-county administration where desirable. The school system is largely independent of both city and county administrations, even though substantial financial support emanates from both.

There are a great number (in the neighborhood of 10,000) miscellaneous civil subdivisions authorized by the constitution, and recent tendency is toward reducing the number through consolidation or absorption of their functions by State Departments.

The fiscal system of the state is under the jurisdiction of the legislature. This body makes detailed appropriations from the general revenue fund for state departments, state schools and other state institutions. The Highway Commission and State Board of Education receive their appropriations in lump form and direct disbursements in detail. The State Board of Control prepares biennial budgets for the guidance of the legislature in making appropriations.

The State revenues come from an ad valorem tax set by the Constitution at a maximum rate of 35 cents for each \$100 property valuation; an ad valorem tax with the same rate limit to be allocated exclusively to the school fund; an ad valorem tax of seven cents per \$100 valuation for the pension fund of Confederate soldiers and their widows; a general business occupation tax, three-fourth of which goes to the general revenue funds and one-fourth to the school fund; a gross receipts tax derived largely from petroleum production, three-fourths of which goes in the general fund and the remainder to schools; an insurance company occupation tax, divided in the same proportions; a cigarette tax which goes one-half to the general fund, one-half to the school fund; and a gasoline tax, three-fourths of which is allocated to the highway fund and one-fourth to the school fund.

Inheritance and franchise taxes go in their entirety into the general fund.

The tax situation, in so far as it affects business enterprise, is generally considered not burdensome, according to chamber of commerce officials in the state. Neither business nor individuals pay a state

income tax in Texas; nor is any general sales tax levied.

There are various occupation taxes for different types of business. These range from \$1 flat to \$10,000. Franchise taxes are levied on corporations at the rate of \$1 per \$1,000 capital allocated to Texas. Gross receipts taxes are levied on several types of business: express companies, 2½ per cent; telephone and telegraph companies, 1½ per cent to 2.275 per cent; gas, electric and water companies, 3 per cent to 5 per cent; motor transport companies, 2.2 per cent; and collection agencies, one half of one per cent.

Certain production taxes are imposed: sulphur, \$1.272 per long ton; petroleum, 4.125 per cent of market value plus three-sixteenths of one cent per barrel; natural gas, 5.2 per cent of market value; carbon black, 4.1 per cent of market value; and cement, 2½ cents per hundred weight.

Life insurance companies pay a gross premium tax ranging from five-eighths of 1 per cent for domestic companies to 4.65 per cent for foreign companies. Other insurance companies pay a gross premium tax ranging from one per cent to 2.75 per cent.

Selective sales taxes include motor vehicles, 1 per cent; gasoline, 4 cents per gallon; specified "luxuries," 2 per cent; beer, \$1.24 per 31 gallons; alcoholic liquor, \$1.28 per gallon; vinous liquors, 10 cents to 25 cents per gallon; cigarettes, 3 cents per package; and oleomargarine, 10 cents per pound.

Finance

The financial structure and condition of both government and banks in Texas is excellent.

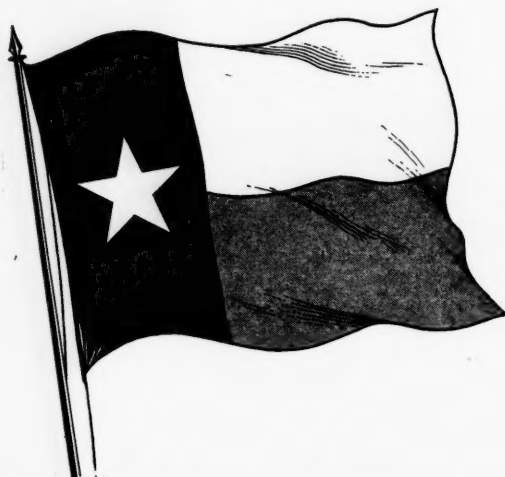
No state debt may be created, and the State is virtually required to operate its various funds on a cash basis. This is made compulsory in the State Constitution. As of today, the State's finances are in remarkably good shape. Large cash balances, aggregating over \$100,000,000 are in the several state funds. The situation is strengthened still further by the State's public domain ownership, from which oil and gas are produced for the benefit of state funds. Administration of the State's fiscal affairs is vested in the State Comptroller of Public Accounts, and the office is reputed to have been fortunate for years in enjoying competent management.

Other financial institutions parallel the State government in soundness. National banks in the state, which numbered 434 on December 31, 1945, held aggregate resources of \$5,166,434,000; State banks, numbering 409 held \$998,354,500.

This vast backlog of dollars, better than \$6 billion, a large portion of which is available for investment in new business, augurs well for the industrial expansion now under way in the state.

In addition to the operating or "available funds," the state has in its possession several large permanent or endowment funds. Existence of these funds is recognized as a noteworthy characteristic of the Texas fiscal system. They were derived primarily from the sale of public domain tracts, and from oil from such tracts. They exist today because of the unique conditions under which Texas retained its public domain when annexed to the Union.

The Lone Star Flag.



EDUCATION

Texas is well equipped with schools. There are more than 15,000 public schools of all classifications. It has 25 colleges and universities, five professional schools, six teachers' colleges, 36 junior colleges and 11 Negro institutions of learning above high school status.

Public funds to the amount of \$83,611,730 were spent for education during the school year 1943-44. Of this sum \$81,918,930 went for general education and \$1,692,800 to finance vocational training programs.

Enrollment for vocational training totaled 54,065; for all other courses in all types of institutions, 1,242,985.

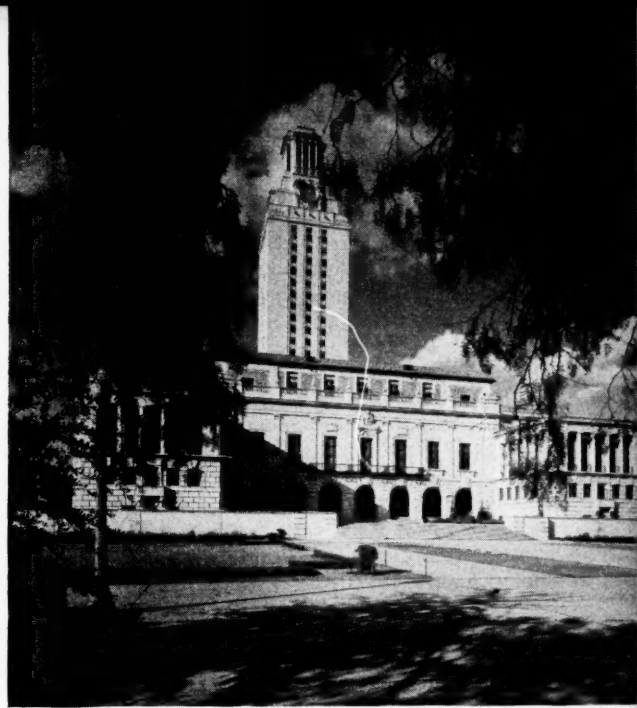
The colleges and universities include: Abilene Christian College at Abilene; Agricultural and Mechanical College of Texas, College Station; Austin College, Sherman; Baylor University, Waco; College of Mines and Metallurgy, El Paso; Daniel Baker College, Brownwood; East Texas Baptist College, Marshall; Hardin-Simmons University, Abilene; Howard Payne College, Brownwood; Incarnate Word College, San Antonio; McMurry College, Abilene; Mary Hardin-Baylor College, Belton; Our Lady of the Lake College, San Antonio; Rice Institute, Houston; St. Mary's University, San Antonio; Southern Methodist University, Dallas; Southwestern University, Georgetown; Texas Christian University, Fort Worth; Texas College of Arts and Industries, Kingsville; Texas State College for Women, Denton; Texas Technological College, Lubbock; Texas Wesleyan College, Fort Worth; Trinity University, San Antonio; University of Houston, Houston; University of Texas, Austin.

Of these, all are coeducational except A & M College, which admits men only, and Incarnate Word, Mary Hardin-Baylor, Our Lady of the Lake and Texas State College for Women which accept only female students.

Professional and technical schools: Austin Presbyterian Theological Seminary, Austin; Dallas Theological Seminary, Dallas; Southwestern Baptist Theological Seminary, Seminary Hill; Southwestern Medical College, Dallas; South Texas School of Law, Houston; South Texas School of Commerce, Houston.

Teachers' colleges: East Texas State, Commerce; North Texas State, Denton; Sam Houston State, Huntsville; Southwest Texas State, San Marcos; Stephen F. Austin, Nacogdoches; Sul Ross, Alpine; West Texas State, Canyon.

Junior colleges are located in Amarillo, Brenham, Brownsville, Cisco, Clarendon, Clifton, Corpus Christi, Decatur, Edinburg, Gainesville, Wichita Falls, Hillsboro, Dallas, Houston, Jacksonville (2), Stephenville, Kilgore, Beaumont, Goose Creek, Arlington, Fort Worth, Paris, Ranger, San Angelo,



Main Building, University of Texas.

San Antonio, Kerryville, Keene, Temple, Texarkana, Seguin, Terrell, Tyler, Victoria, Plainview, Weatherford, and Tehuacana.

Negro institutions: Bishop College, Marshall; Butler College, Tyler; Houston College for Negroes, Houston; Jarvis Christian College, Hawkins; Paul Quinn College, Waco; Prairie View University, Prairie View; St. Philips Junior College, San Antonio; Samuel Huston College, Austin; Texas College, Tyler; Tillotson College, Austin; Wiley College, Marshall.

The public free school system of the state is divided into more than 5,000 school districts, over which general jurisdiction is held by a nine-member State Board of Education, appointed by the Governor to six-year overlapping terms. The members of this board serve without pay, other than actual expenses incurred in performance of their duties. Direct administration of the system is vested in a State Superintendent of Public Instruction, elected in a general election for a two year term.

The school fund is provided from a combination of sources: an ad valorem tax on property, parts of the occupational and poll tax collections, interest and rentals derived from administration of public lands allotted for educational purposes and direct appropriations by legislative action from the general revenue fund of the state. In these last, there has been a trend in recent years toward steadily heavier appropriations. Federal funds to the amount of \$450,000 were used as part of the vocational training fund for 1943-44.

The evolution of education in Texas reaches back through four centuries. Schools were originally introduced for the purpose of "taming" the Indians and thereby making the task of civilizing them less

formidable. The earliest missions set up by the Spanish pursued this course of "spiritual conquest" with energy, and from those pioneer institutions arose the foundation for vocational training now so popular in educational promotion.

The first of these historic institutions, which might aptly be called public schools, were established in 1746 in the region now occupied by San Antonio. Their annals record the "tribulations" attendant upon "reducing to schoolrooms the whooping savages who gleefully endeavored to elude education." The officially published purpose of the schools was "to teach reading, writing, arithmetic, religious catechism, and the rights and duties of society."

One of the earliest moves of the first immigrants from the United States was to cut logs and build schoolhouses. Until these were provided, classes are recorded to have been held out in the open or in settlers' homes.

One matter of friction between Texans and the Mexican government arose over the question of schools. Mexico made some effort to satisfy the energetic people of its then turbulent province, at one time donating seventeen thousand acres of land for a single school. The efforts they made, however, fell short of the demands of Texans for educational facilities, and many private schools sprang up between 1823 and 1836.

During the period of the Texas Republic, a public school system was inaugurated. Many thousands of acres of public land were granted by legislation to provide at least one school for each county, and a huge tract was set aside for the establishment of colleges or universities. As an outgrowth of this policy, the University of Texas, largest of the state's educational institutions, and Texas A & M College receive substantial income from oil produced on a two million acre tract set aside for their support.

The 2,000,000-acre land endowment produced relatively little cash benefit until 1923 when a discovery oil well blew in. It marked the turning point for the

University of Texas and started the institution in the oil business on a big scale. Today more than 1,000 wells produce oil on the land. The royalty from production, the rental of leases and cash bonuses paid for leases—which are auctioned to oil companies—go into a permanent fund which cannot be spent. Only the income from the invested portion of the fund can be spent. That income is divided two-thirds to the University of Texas and one-third to Texas A & M College, giving each institution a source of operating income which supplements legislative appropriations, tuition and other fees and income from sales and services.

Cash and securities in the permanent fund now total about \$56,000,000. Adding \$10,000,000 for the book value of the land, the value of the permanent fund is \$66,000,000.

The University of Texas, capstone of the state's educational system, has grown from a small institution with a handful of students in 1883 to a 50-building plant with 12,400 students. Its plant expansion has been made possible by pledging income from the permanent fund toward amortizing building bonds.

Today it is the leading higher education institution from the point of view of enrollment, graduate work, research, libraries and teaching staff south of Chicago and east of California.

The Civil War wrought a serious setback to educational progress; but the new state constitution of 1876 set aside a flexible appropriation for schools of up to one-fourth of the general revenue fund, and allocated one-half of the public domain for school support. In the same year A & M College was established, at first an institution of arts and literature, but later to become outstanding as a scientific and vocational bulwark.

Sam Houston State Teachers' College at Huntsville was established in 1879, and in 1882 the University of Texas was organized by authority of legislative act. District school taxes were inaugurated in 1883.

In the early years of the present century, education made notable advances. In 1915, a law requiring compulsory school attendance was passed. In 1918, a free-textbook amendment to the constitution was voted. Development of high schools, which had already been given impetus by legislative enactments in 1912, was further augmented between that year and 1920 by a junior high school movement. Vocational education, which had gained a modest foothold as early as 1906, grew rapidly. In 1917, a large number of public schools introduced courses in vocational agriculture and home economics as a prelude to later intensive activity in this field.

Today, vocational education is practically universal throughout the schools of Texas. Adult programs have been added to those offered at first only to students of school and college ages. Training under these programs includes trade and industrial education, vocational agricultural training, homemaking and distributive education. The Extension Division of the University of Texas conducts a vocational training project in which as many as 7,000 men and women have been enrolled at one time. In addition to vocational education, this project provides courses for

Texas Tech at Lubbock.



adults in general, literary and parent education. When enrollment in these additional courses is taken into consideration, the number of persons participating at one time has been known to run as high as 60,000.

The authorization of a state college carried with it grants for branches. Some of these branches have materialized in the Medical School in Galveston, the Dental College in Houston, and the College of Mines and Metallurgy at El Paso which, together with the Agricultural and Mechanical College, afford a well-rounded state-supported program for professional and technical training. This program is of especial importance in connection with the intense interest being shown in agricultural and industrial development. The School of Agriculture of A & M College has a larger number of undergraduates pursuing courses in agriculture than any other college of its type in the world. It is recognized as being especially close to the agricultural life and needs of the people. Through its extension service it carries out local farm programs consisting of direct instructional activity and distribution of informative literature. Field experiment stations sponsored by the college are working out practical research developments in as many as 16 different sections of the state. Its diversified technical courses and industrial research projects are equally as valuable for the rapidly expanding industrial economy of the state.

One of the most reassuring aspects of the educational picture in Texas is the avowed realization on the part of all concerned that there must be no let-up in educational progress, that ground already covered must be fortified with continued and unceasing effort, and that fields not yet entered must be tackled with energy.

Welfare and Health

Institutions and projects directed toward improving the general welfare and health of its people are objectives that rank side by side with educational progress on the state's agenda. Important contribution to this purpose is afforded by a number of state-maintained institutions for the relief and education of the stricken and handicapped.

There are five such institutions in Austin alone: Texas School for the Blind is established on property valued at \$850,000 and cares for well over 200 blind students annually; Texas School for the Deaf has

over 500 students and property valued at \$1,140,000; State School for the Deaf, Dumb and Blind for Colored Youths, nearly 300 students, property \$800,000; Confederate Women's Home, 91 residents, property \$190,000; Austin State Hospital, over 2,000 patients, property \$1,600,000.

At Corsicana there is the State Home and School which cares for nearly 1,000 children and has property valued at \$850,000; at Sanatorium, near San Angelo, the State Tuberculosis Sanatorium with a capacity of 800 patients, property value \$1,682,786; at Waco, Home of Neglected and Dependent Children, nearly 400 inmates, property \$490,000; at Gatesville, the State Juvenile Training School, around 1,000 inmates, property \$900,000; at Gainesville, Girls' Training School, 250 girls, property \$245,000; at Rusk, Rusk State Hospital capacity over 2,000 patients, property \$1,250,000; at San Antonio, San Antonio State Hospital, over 2,500 patients, property \$1,800,000; at Terrell, Terrell State Hospital, over 2,000 patients, property \$1,700,000, and at Wichita Falls, Wichita Falls State Hospital, 2,000 patients, property \$2,700,000.

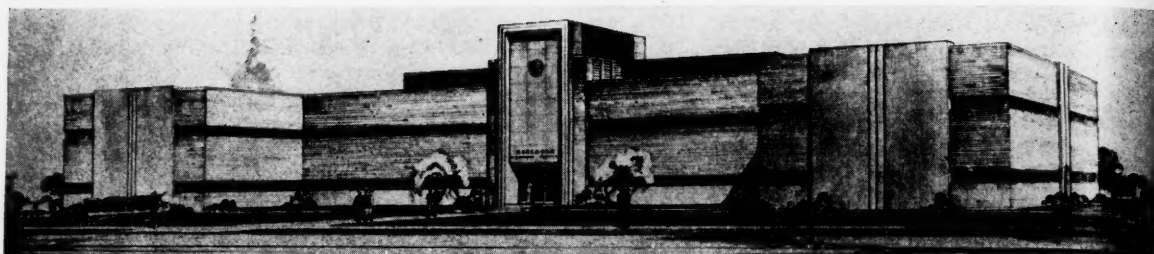
The administration of health laws of Texas is in the hands of the State Department of Health, and rapid progress has been reported in recent years toward gaining control over all health problems. Vital statistics are given special attention.

Additional contribution to progress in education, welfare and health is furnished by numerous other civil and associative groups. The State Department of Agriculture actively backs the formation of Four-H and similar farm youth organizations, one of the chief goals of which is improved living standards and health. Annual awards are made for achievements in these departments as well as for excellence in agricultural production. Control of farm pests and disease breeders is high on the program of the Department for improving rural living conditions.

Clubs and organizations of a more private and exclusive nature also contribute substantially to welfare and health improvement in connection with their social activities. Some of these groups date back to the 1880s. Among the larger groups that combine welfare activity with social attributes is the Parent-Teachers Association, established in 1909, and the State Federation of Women's Clubs. Of a more local nature, historical, study and social clubs, most of them with long-time backgrounds, are active for welfare in practically all communities.

Texas A. & M. College.





Proposed Shell Production and Exploration Research Building, Houston.

RESEARCH

Intensive and untiring research is recognized by Texans as vital to the program of expanding industry and the higher living standards which they are pursuing.

In this field, private enterprise and state agencies work hand in hand.

Petroleum interests in Texas are noted for the space, money and attention they devote to applied science. Their laboratories are equipped with the most modern and powerful instruments available to science and include electron microscopes, spectrometers, diffraction apparatus and mass spectographs. Research workers, at one time dubbed "goldbrickers" by their fellow employees, have become the most highly respected members of the industry—technicians to whom other workers look eagerly for improved methods and products that will enhance their earnings and make more pleasant their efforts. No longer is research confined to shabby quarters in the attics of industrial buildings. Laboratories in Texas are housed in separate and specially designed departments that often enjoy more space than is given over to administration and accounting.

Many industries other than those of petroleum also aid the cause of science. Besides independent engineering firms devoting their efforts to geophysical, seismographic and related forms of experimentation, many of the processing and fabricating companies of the state have their own laboratories. This is especially true of the relatively new chemical industry, the metal producing and processing plants and those engaged in processing food. Indeed it would be hard to find the Texas firm that does not have within its reach experimental facilities of either individual or group project type.

Through their government Texans long ago took steps to make sure they would not lag in carrying the torch of scientific progress. By the constitution and laws of the state, their State University and A & M College have been given statewide responsibilities for research in science and industry on the one hand and in agriculture and mechanical arts on the other, both of which go straight to the heart of scientific effort affecting the welfare of Texas economy. A great num-

ber of experiment stations has been set up throughout the state for agricultural purposes by Texas A & M.

About twenty years ago the Bureau of Business Research of the University of Texas was established. This organization has become one of the leading business research bureaus of the United States, and its monthly publication, *The Texas Business Review*, regularly presents tables, charts and analyses of all the principal types of industries in the State. In answer to the growing needs of the business interests of Texas, the Bureau has been recently reorganized and enlarged and its services greatly expanded.

Dr. Gibb Gilchrist, president of Texas A & M, revealed the true meaning of the assignment given these institutions when he stated that although geographic frontiers may be no more, other frontiers far more significant still exist. These, he says, lie in the sphere of developing natural resources, and their exploration embraces not only a responsibility but an opportunity and a challenge.

For achieving this objective there has been no stint of personnel or equipment. In their faculties, laboratories, libraries and research bureaus, the educational institutions of Texas are recognized as possessing facilities that compare favorably with those in any other section of the country.

That the cooperative efforts of individual leadership and state institutions are paying dividends is evident in the lead Texas is taking in the establishment of ultra-modern productive facilities and in the development of new products—in blazing trails through the frontiers along which Dr. Gilchrist envisions the future destiny of Texas to lie.

The Cotton Research Committee of Texas has centered its work in fibers at Texas Tech, under supervision of presidents of Texas Tech, Texas A. and M. College, and the University of Texas. The committee was set up in 1941 "for the purpose of establishing cotton research facilities in Texas." Its research equipment includes complete spinning, weaving and chemical laboratories, equipment for research on plastic laminates and impregnation of cotton fibers with various resinous substances, and for other processes.



Palo Duro Canyon.

RECREATION

Texas traffic arteries are reported as teeming with tourists from other states. Passenger transportation by rail, bus and air is stepped up to a high rate, and resumption of automobile travel following the ending of gasoline rationing is evidenced by the 22 per cent increase in filling station sales for 1945 over 1944.

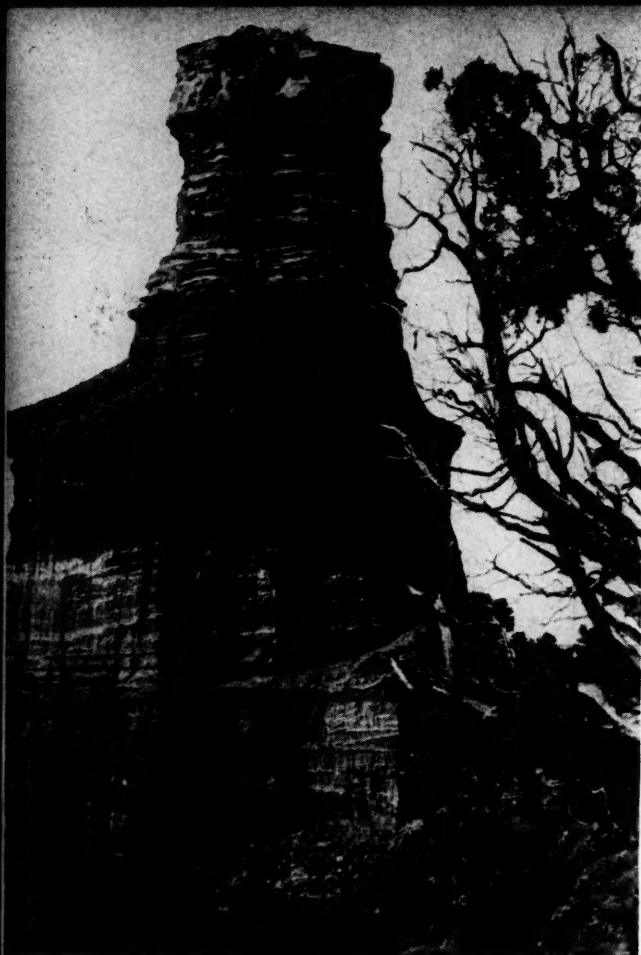
Hotels, camps and courts catering to tourists are crammed to capacity, and a great many of the cars on the highways are from points outside the state.

These visitors find many attractions. From the pine forests that shade its eastern borders to the multi-colored canyons of the Big Bend, and on to the shimmering sands of the Trans-Pecos, recreational opportunities are abundant and fascinating.

Variety of climate and topography make possible almost every type of outdoor entertainment. Golfing is a year-round sport in the greater part of the state, with courses numerous and conveniently located. To facilitate other outdoor pastime, hundreds of thou-

sands of acres are devoted to parks and playgrounds, some of which remain in their natural state, practically untouched by the hand of man.

Inland from the Gulf shore line, the coastal plain, indented by innumerable bays, bayous and inlets, and dotted with inland lakes, is covered with grass and clumps of timber. Along the Rio Grande River, a beautiful valley offers striking diversity. Much of the western section of Texas consists of semi-desert country, many parts of which are virtually the same as when first discovered by white men. Farther south, modern irrigation has been added to nature's bounty to produce a veritable garden of verdure and growth. Cutting across the state in the northerly sector are to be found many and widely diversified resorts and playgrounds. Through the heart of Texas, now a thriving industrial and agricultural section, recreational facilities have been enhanced rather than retarded by the march of civilization. The natural ad-



Left—Rock Formation, Big Bend National Park.

vantages of both hill country and flat areas have been preserved and improved.

For Nimrods and anglers there is offered all that the most exacting could ask. Texas is by far the outstanding region in this respect in the United States. In total value of wildlife it holds first rank among the states, with a value estimated at close to the \$100 million mark by the United States Forest Service.

Since its pioneer days the state has been blessed with such an abundance of hunting game that only in recent years has it been found advisable to adopt rules for restriction and preservation. Open and closed seasons now have been established on practically all species, but in season the breadth of choice is almost beyond belief. Deer, bear, wildcat and mountain lion are plentiful in the west and southwest, while small game such as squirrel, rabbit, and opossum are found almost everywhere. Fur bearing animals also are to be found in a number of sections. These include red and grey fox, badger, skunk, mink, muskrat, beaver and otter. Along the Mexican border and in adjacent areas are found wild hog and ocelot, jaguar, bobcat, lynx, bear, coyote and wolves, both red and grey. Through arrangements established with the Mexican government, permits are obtainable for big game hunts below the border where herds of antelope roam along with predatory game.

Deer is the principal game animal. In 1944 a total of 10,987 deer were reported to the Game, Fish and Oyster Commission as having been killed on private preserves. These preserves are estimated to constitute about one-fourth of the total deer range of the state, indicating a total kill of about 40,000. Texas deer are of several varieties, consisting chiefly of white-tail, Sonora and black-tail.

Birds are galore. The Gulf Coast is recognized as one of the greatest natural bird regions in the world. During their season, duck and geese blacken the sky in migratory flight. Wild turkey abound in the east and south. Quail and doves are prevalent throughout the state.

Hunting takes a prominent place in Texas recreation. Many hunts have assumed the status of annual events. At least one of these has attained worldwide renown. In the fourth week of every September, members of the Texas-Oklahoma Wolf Hunters Association gather at their "Wolf City" headquarters for one of the most colorful events of modern times. In addition, Texas has its own wolf hunt, sponsored each autumn by the South Texas Wolf Hunters Association. Fox hunts are equally popular. They take place usually in the eastern part of the state and follow in procedure the traditional English fashion.

For the Texan fisherman, the problem is more one of making up his mind what he wants to fish for than of finding the fish. Along the 2,000 miles of the coastal inner shoreline, the Gulf is a teeming ground for Spanish mackerel, pompano, redfish, gulf trout and



Left—Sailing on Lake Worth.

almost all other deep-sea varieties, including the ever popular tarpon. Tarpon "rodeos" are regular annual events attended by visitors from all over the country. These take place during June and July at various resorts along the Gulf.

Diversity of species equaling that of the Gulf also is available for inland fishermen. Innumerable inland lakes and reservoirs, rivers and streams, are restocked annually from state and federal hatcheries with almost every game fish variety imaginable. Probably the most popular consist of big and small mouth bass, catfish, perch and crappie. Commercial fishing is not permitted in inland waters, so sport fishermen can look forward to a supply that is all their own. Facilities are farflung, and many excellent fishing places are to be found adjacent to cities and towns; nearly all afford comfortable accommodations.

For less strenuous activity, the coastal resorts and inland tourist centers present opportunity for more leisurely entertainment. Many of the bathing beaches along the Gulf are nationally known and have yacht concentrations and pleasure boat facilities consisting of a great variety of craft. Boating is a favorite sport also on the inland lakes and streams, where both motor boats and sailing craft are found in numbers. Regattas are a frequent and popular pastime.

In addition to the usual forms of recreational activity, Texas has a type that is all its own. Life on the range may be sampled there by tourists so minded. Numerous resorts, frequently known as "dude" ranches, but affording all the conditions of true ranch life, dot the hill country of the Edwards Plateau. A vacation at one of these may be either strenuous or

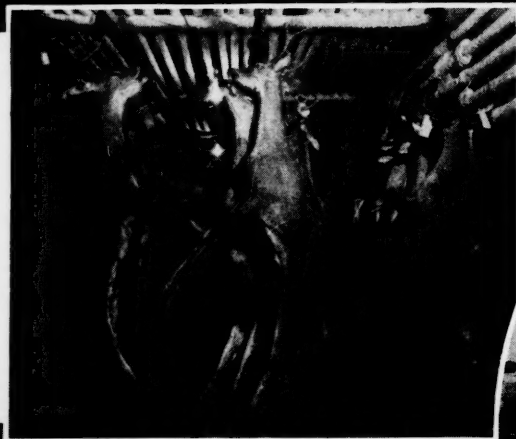
mild, for most of them are equipped with modern facilities and in any event have every advantage for a leisurely sojourn if that is what is desired. The visitor may hike, ride and participate in round-ups; or he may loll and enjoy the fun as a mere spectator. He may play bridge or ping pong or listen to phonograph records.

Closely related to the ranch resorts is another activity that Texas can almost claim as its own. It is polo. More polo mounts are trained and more polo played there than in any other region even of like size. Ponies and Texas have become almost synonymous. A close relative of the polo pony is the rodeo mount; and not to know rodeos is not to know Texas. The first of these colorful events was held as early as 1884, as a contest between two rival ranches. Since that time they have grown immensely in popularity and have spread to many other sections of the nation. So prominent have some Texas rodeos become that they now receive international acclaim. Outstanding among these is the annual event held to decide the world championship in rodeo features. At this event, which is part of the Southwestern Exposition and Fat Stock Show, champion contestants gather from other states and it is not necessarily a Texan who may carry away top honors. The exposition covers nine days beginning the second Friday in March.

Supplementing privately sponsored events and facilities, the State of Texas has been generous with its acreage in providing playgrounds and resorts for its citizens and visitors. Covering greatest space are its four national forests. These are Sam Houston National Forest, which includes portions of Montgomery,

The "Cotton Bowl," Famous Dallas Stadium.

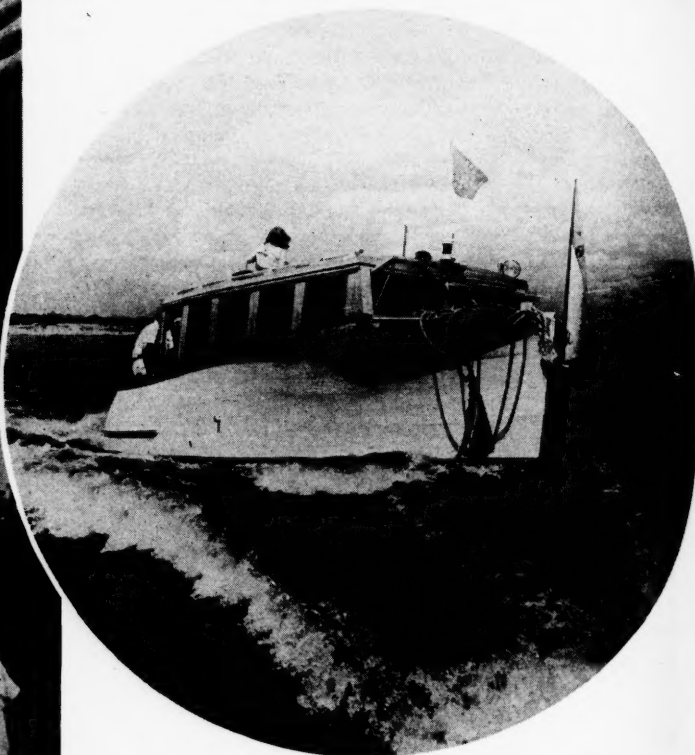




Walker and San Jacinto counties and embraces 500,000 acres; Angelina National Forest, which takes in parts of Angelina, San Augustine and Nacogdoches counties in an area of 400,000 acres; Sabine National Forest along the Sabine River, borderline between Texas and Louisiana, comparable in size to Angelina; and the 165,000-acre Davy Crockett National Forest, comprising parts of Houston and Trinity counties. All are protected by the United States Forest Service, and each unit is under the direct care of assigned forest rangers.

Five state forests increase the woodlands playground area by 6,403 acres. Maydelle State Forest, 2,360 acres, lies in Cherokee County; Conroe, 1,633 acres, Montgomery County; Kirbyville, 1,700 acres, Newton County; Kirby, 600 acres, Tyler County; and Mission, 110 acres, Houston County. Throughout the state, in 1935 and 1936, tree seedlings were planted to the number of 3,650,000, and since that time, or at least up to the time of the war, 10,000 to 15,000 acres have been replanted annually. The Texas Forest Service patrols about eleven million acres of woodland, including the state forests, and maintains an effective fire-fighting force.

The state's diversity of wild plant growth, of which these national and state forests are typical, is almost past belief. Varieties of grasses include about half



Circle—Motor Boating in Texas.

Top (Left)—Sail Fish, Greatest Game Fish in Southern Waters are Plentiful in the Gulf Off Texas.

Middle (Left)—Opening Day of the Deer Season.

Bottom (Left)—Golfing is a Year Round Texas Sport.

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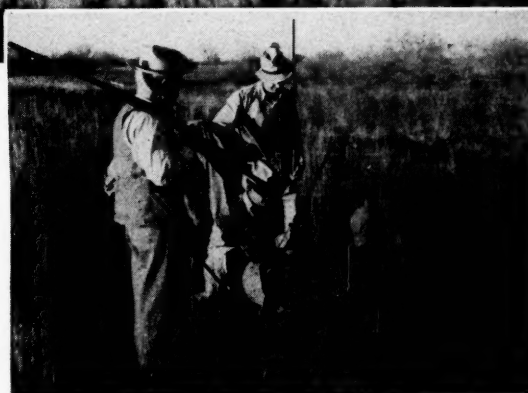
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Above—Ducks over Texas Rice Fields.

Right—Quail Hunting.



of the 1,200 kinds found in the United States, and the variety of trees is equally impressive. Principal among these are ash, basswood, bay, beech, birch, bois d'arc, catalpa, cedar, chinquapin, corkwood, cottonwood, chinaberry, cypress, dogwood, elm, fir, gum, hackberry, hawthorn, hickory, holly, ironwood, locust, maple, magnolia, mesquite, mimosa, mulberry, many varieties of oak, eight species of pine, palm, pecan, persimmon, sycamore, Texas ebony, walnut and willow. Cactus is scattered over the western and southern portions. Maguey, known frequently as aloë or century plant, which blooms every 20 years, is widely distributed. Yucca, showiest of semi-arid plants, grows throughout the west and southwest. Gayule or rubber plant is found in the Trans-Pecos and the candelilla or wax plant in the Big Bend country. Flowers cover a wide range, taking in the beautiful desert varieties as well as those indigenous to states in the south and east. Two Texas weeds have made history. These are milkweed with its snow-white flowers which was used by primitive peoples to cure ringworm and rattlesnake bite, and the loco or crazy weed whose fame lies in the place it has taken in song and saga.

Of great interest to tourists and visitors are the state's mountains and canyons. It is usual to think of the region as flat throughout, but this is far from being the case. There are 37 mountains having altitudes around 8,000 feet. Five peaks are higher than

any east of the Mississippi River. For comparison, El Capitan peak in Culberson County, Texas stands 8,700 feet high. Mount Mitchell in North Carolina, highest peak of the Appalachians is 6,228 feet high. Of the canyons, Santa Helena on the Rio Grande in Brewster County is probably outstanding. Its walls rise perpendicularly for 2,000 feet. Others noted for their picturesqueness are Mariscal and Boquillas, below Santa Helena; Pinto, Capote, Maranville, Bofecillos in the Davis Mountains; McKittrick, east of Guadalupe Mountains; Frio, in Real County; and Palo Duro, Rule and Gorge of the Canadians in the High Plains area.

The San Jacinto Battlefield, Lake Corpus Christi with its 12,831 acres near Mathis, and nearly sixty state parks round out public facilities for sport and recreation. The State parks, with their nearest town and acreage are: Fort Griffin State Park, near Albany, 500 acres; Palisades, near Amarillo, 320 acres;

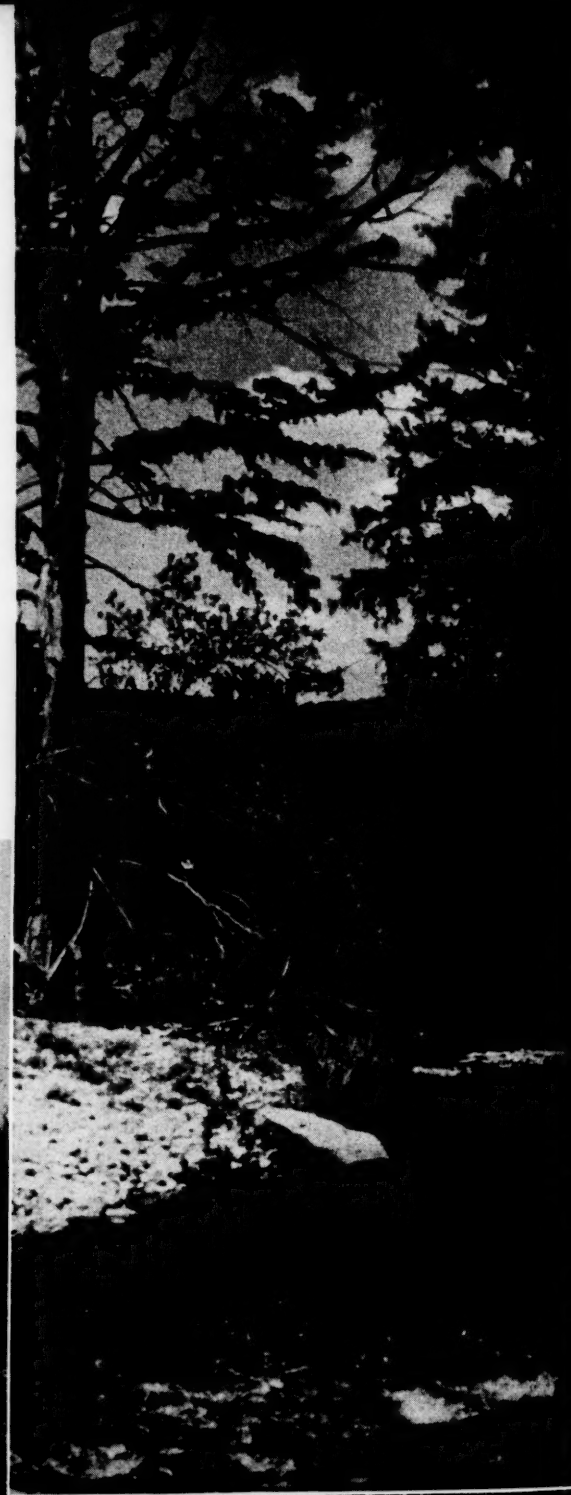
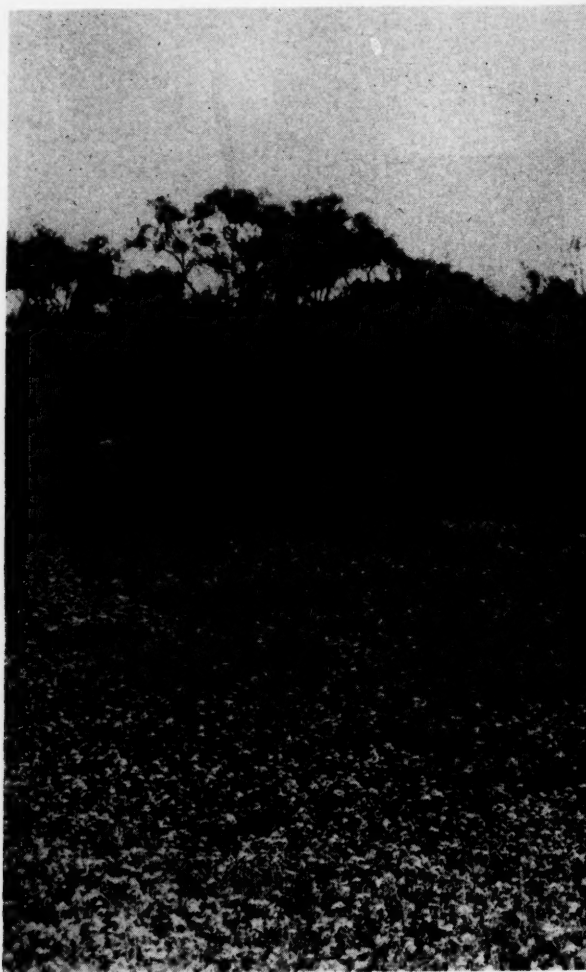
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FOR

Aspermont at Aspermont, 500; Balmorhea, 950; Bastrop, 2,100; Beeville, 120; Big Spring, 554; Blanco, 110; Bonham, 532; Brownwood, 538; Cleburne, 500; Clifton, 104; Crosbyton, 45; Dangerfield, 500; Grayson County, 350; Frio County, 51; Hereford, 540; Huntsville, 2,500; Katomcy, 10; Kerrville, 500; Lamesa, 500; Lampasas, 142; Leonard, 15; Lockhart, 327; Meridian, 542; Mineral Wells, 70; Nacona, 500; Normangee, 500; Palestine, 1,315; Paris, 3,592; Stephenville, 300; Tyler, 598; Lake Abilene State Park, at Buffalo Gap, 502; Longhorn Cavern, Burnet, 550; Grapevine Springs, Coppell; Devil's River, Del Rio, 500 acres; Davis Mountains, Fort Davis, 5,700; Fort Parker, Groesbeck, 1,200; Jeff Davis, Hillsboro, 35; Love's Lookout, Jacksonville, 23; Caddo Lake, Carnack, 500; Tips Junior Park, Three Rivers, 30; Garner Park, Uvalde, 478; Robinson, at Llano, 69; Womack and Steele Parks, near Lovelady; McKenzie, near Lubbock, 648; Mother Neff, McGregor, 256; Palmetto, Ottine, 167; Ochiltree, Perryton, 647; Goose Island, near Rockport; Baredo Park, San Benito, 75 acres; Max Starcke Park at Seguin; Buescher, Smithville, 1,903 acres; Burg, at Stonewall, 15; Thomas, Van Horn, 30; and topping them all off, the 225,000 acres of Big Bend State Park, Marathon.

Blue Bonnets, the State Flower, Cover Texas in Spring.





NOW... WE KEEP THEIR NOSES OUT of our business

THE porpoise—or as some know it, the bottle-nosed dolphin—carries in its head a blubber, from which, after four years of processing by a secret method, was refined the world's finest and most expensive oil. However, according to government sources, the quality of this oil declined with the death of its inventor.

Requested by the Navy to find a substitute, Cities Service Research, after a year of laboratory work and nine months of proving by the Bureau of Standards, developed a successful substitute out of petroleum.

Used in chronometers, electric meters, observatory instruments and other precision equipment, this oil *stays put* on the finest bearings. *It does not spread* like ordinary oil...nor is it

likely to oxidize, or become gummy. And it will lubricate at temperatures way below zero. All this means that tremendously costly instruments—frequently upon which many lives may rely—now may last longer and perform *dependably*.

The oil costs—take a deep breath—\$1,100 a gallon! It is sold in little bottles 5cc in size, and is applied with a fine wire which has been dipped in the oil and then drawn across the

tiny bearing and its pivot, to leave just a trace.

Considering that $\frac{1}{4}$ of a drop is required for the bearings of a 21-jewel watch, the 61,400 drops in a gallon would lubricate 3,868,200 bearings for less than a third of a cent each... and provide every one with the finest protection known to science.

Out of just such research and mature experience, Cities Service is in a better position than ever to help industry to improve its efficiency of production and quality of output.

Cities Service Oil Co., Sixty Wall Tower, New York 5, N. Y. In the South, Arkansas Fuel Oil Co.



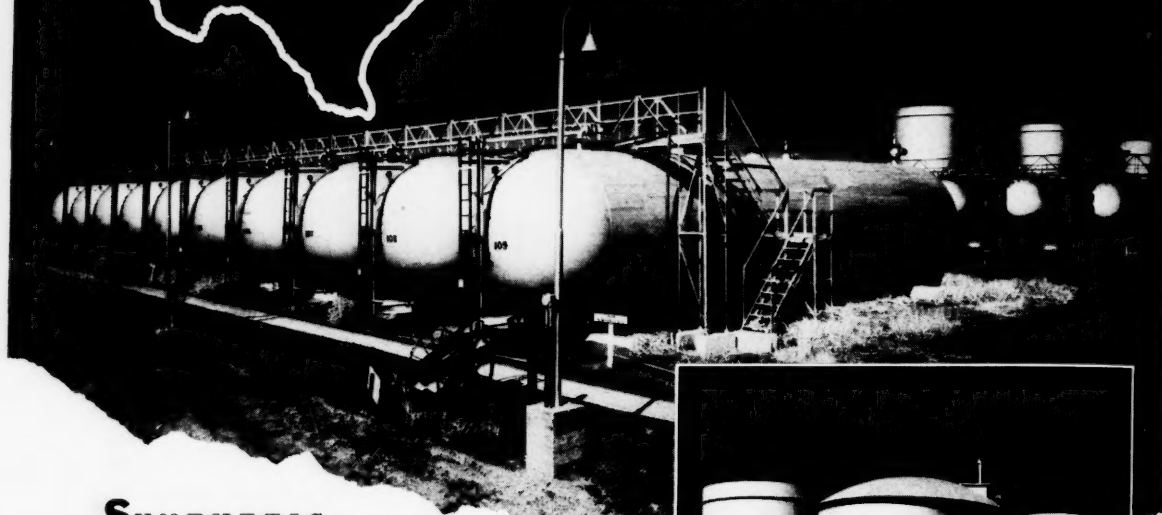
CITIES SERVICE OILS

service is our middle name



Chemical Plant in Texas

produces synthetics from
natural gas . . .

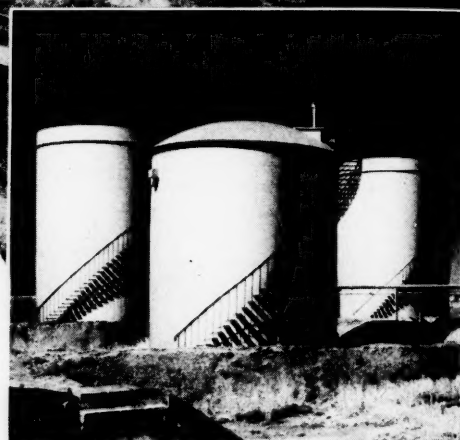


SYNTHETIC

chemicals have been produced from petroleum raw materials in the past. The Celanese Corporation of America, however, is making them at Bishop, Texas, by a new process using *natural gas* as raw material . . . a process that is the result of years of research by chemists and chemical engineers in the company's organization.

The battery of 10 cylindrical tanks with hemispherical ends shown above, and the group of storage tanks shown at the right, are used at this plant to aid in the production of such chemicals.

These installations are typical of the special structures we build for chemical and process plants. We invite you to write our nearest office for quotations on steel tanks and heavy plate work of all kinds.



The 10 cylindrical tanks in the large view above hold 1160 bbls. each. The flat-bottom storage tanks directly above are used to store acetone. The one in the foreground holds 2,000 bbls. and has a floating roof and an umbrella to keep out the weather. The two 5,000-bbl. tanks in the background are also equipped with floating roofs and drainage systems to carry away rain water.

CHICAGO BRIDGE & IRON COMPANY

Atlanta 32145 Healey Building
Birmingham 11530 North Fifth Street
Houston 15614 Clinton Drive
Tulsa 31611 Hunt Building
New York 63313-165 Broadway Building
Cleveland 162216 Guildhall Building

Chicago 42106 McCormick Building
San Francisco 111240-22 Battery St. Building
Philadelphia 31619-1700 Walnut St. Building
Los Angeles 141417 Wm. Fox Building
Washington 4703 Atlantic Building
Detroit 261510 Lafayette Building

Plants in BIRMINGHAM, CHICAGO and GREENVILLE, PENNSYLVANIA

THE TEXAS CENTENNIAL of STATEHOOD *Program*

KARL HOBLITZELLE, *Chairman*

THE sudden and victorious ending of the war found the Texas Centennial of Statehood Commission in the midst of its technical survey of the needs in the field of agriculture.

The Centennial period, co-extensive with the opening of the post-war era, is a time for Texas people to give thanks for Victory by carefully planning for the second century of statehood. The transition from war to peace must be accomplished quickly, surely and with benefits more permanent than for a fleeting year.

Having played an integral part in the winning of the war, Texas is now, at the opening of its centennial observance, ready to do its full part for Peace.

The Texas Centennial program has been approved by the 1945 session of the state legislature and the Commission's life extended through 1946 and on into 1947 when its report and recommendations will be made to the Fiftieth Texas Legislature.

The two-unit program includes:

1. The revitalization of Texas agriculture, which will deal with the following phases of rural life:

1. Natural resources
2. Soil and crop practices
3. Water resources
4. Livestock improvements
5. Farm-to-market roads
6. Rural electrification and rural telephones
7. Local industries
8. Markets
9. Financial resources
10. Labor
11. Health
12. Church and recreational facilities
13. Local government
14. Schools
15. Beautification
16. Modernization needs

2. A revival of interest in American and Texas history.

Members of the commission include Texas citizens residing in every county. Their nominations are made by the chairman and their appointments by the governor—thus assuring statewide representation on the commission and widespread interest in the enterprise.

In Austin on the 19th of February, 1946, the Technical Committee made its report to the board of directors of the Commission. The date marks the climactic event of the historical observance,—the Centennial of the "Last Act of the Republic of Texas" and the organization of the first state legislature.

The movement to aid agriculture is no idle dream. It is working now in many Texas areas. As our soldiers lay down their guns and return to their homes, something is being done in Texas which has for its goal their re-employment—jobs and opportunities especially in rural areas where farms and ranches beckon them with a bright future.

Mass unemployment has always followed war. And with mass unemployment comes its bed-fellow, economic insecurity, both state and nation-wide. This is but one of the pitfalls that the Texas Centennial of Statehood Commission is seeking to help Texans to avoid. "Something must be done" is the cry that comes from those who would preserve the American way of life, from those who worship at the shrine of history, and from business and labor alike. Something will be done by the Centennial Commission to make rural life more attractive and appealing to the multiplied thousands who in recent years left their rural homes to do war work and to many others that they will want to take up farming and ranching as their future occupation.

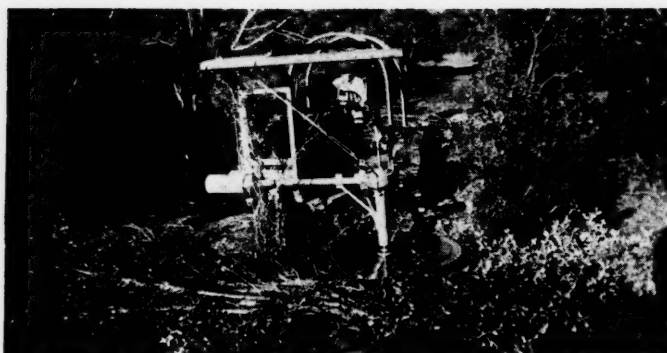
In collaboration with every unit, institution and agency that are devoted to the service of agriculture, the Texas Centennial of Statehood Commission has set about to give practical aid and encouragement to create this maximum result. Motivating the entire movement is the recognized need for all the data and support essential in pointing the way to productive and happier peacetime work in the rural areas of the state.

The Texas Centennial affords Texans just another opportunity for rededication of themselves to the great principle for which the Texas farmer at San Jacinto fired a shot heard round the world—human liberty.

Today: Texas honors her heroes. Texas treasures her freedom. After a hundred years as a state in the great American Union, the Lone Star State looks ahead. Its hats off to the past and coats off for the future.

TEXAS CENTENNIAL of STATEHOOD COMMISSION

612 CAPITAL NATIONAL BANK BUILDING
AUSTIN, TEXAS

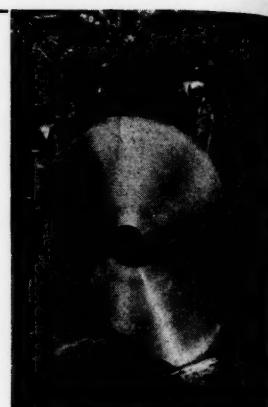


*CLEARING HEAVY UNDERBRUSH, ETC.
FROM TEXAS WASTELANDS*

**LET THE TIPS SAW HELP CLEAR
THE SOUTH'S PASTURE LAND**

**1946
TIPS
IMPROVED
MOBILE
SAW**

Patent #2050952
Other Patents Pending
Guaranteed 90 days



**CROSS CUTTING
FELLED TIMBER**

TIPS ENGINE WORKS

Established 1899

Manufacturers of "TIPS" Engines and Saws

FABRICATORS OF REINFORCING AND STRUCTURAL STEEL

*We specialize in rebuilding and repairing heavy machinery—electric and Oxy-Acetylene welding—
aluminum, brass and gray iron castings*

AUSTIN

TEXAS

SERVING LOW COST NATURAL GAS

**FOR INDUSTRIAL AND DOMESTIC USES
IN**

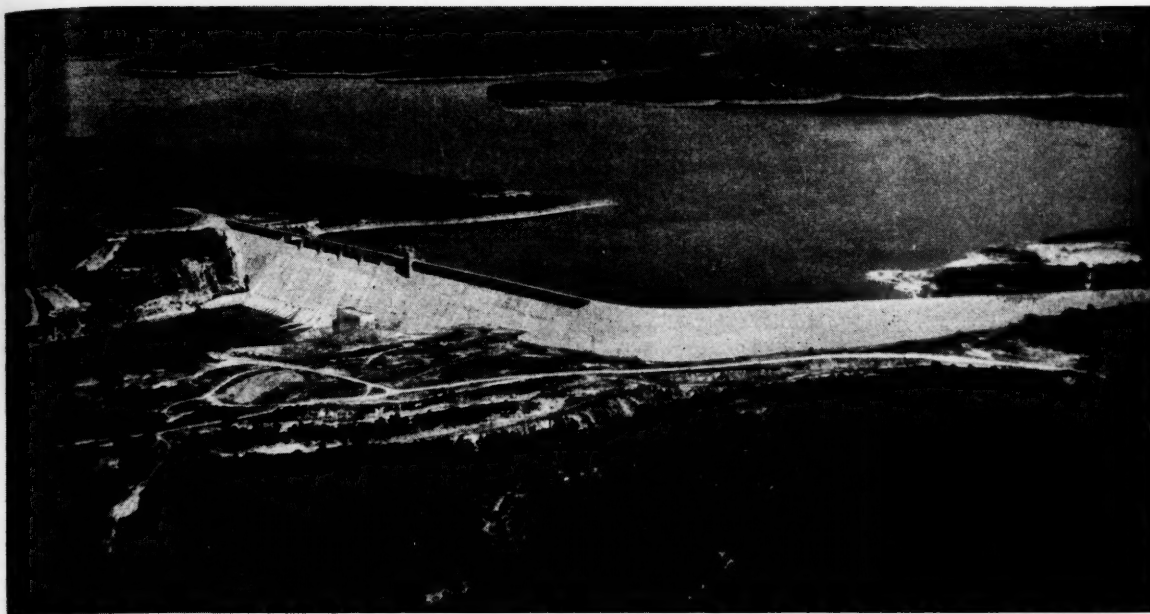
AUSTIN—the CAPITAL CITY OF TEXAS

PT. ARTHUR—HOME of WORLD'S LARGEST OIL REFINERIES

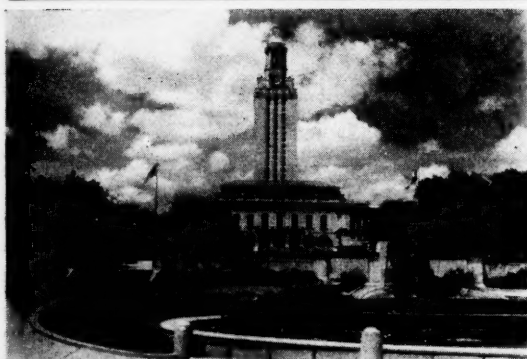
GALVESTON—THE ISLAND PLAYGROUND of the SOUTH

TEXAS PUBLIC SERVICE CO.

"Always Modernize With Gas"



—Mansfield Dam



Congress Avenue, from state capitol, top; 2nd, University of Texas tower; 3rd, canning chili and tamales at Austin, largest factory of kind in U. S.

THE AUSTIN AREA *of Central Texas*

**ABOUT THE STATE CAPITAL CITY
OFFERS THE FINEST INDUSTRIAL
OPPORTUNITY IN THE SOUTHWEST**

It has abundant cheap hydroelectric power; it has deposits of a great variety of minerals; it has an abundance of agricultural raw materials close at hand; and it has fine transportation outlets from its ideal central location to the great markets of the Southwest.

Austin and this area have fine advantages of available resident labor, good living conditions, one of the nation's outstanding Universities; ideal climate and magnificent scenic, playground and recreational advantages.

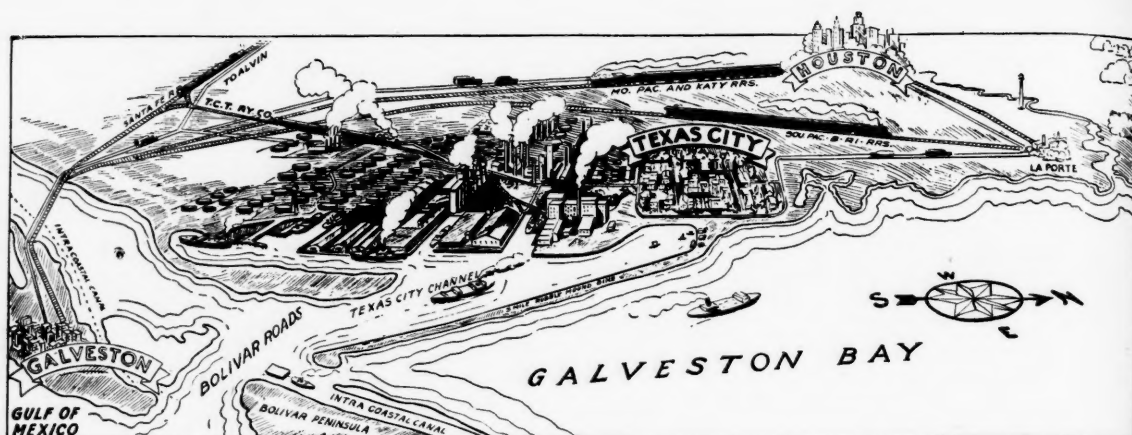
A chain of four great lakes in the Colorado River, in the 80 miles from Austin northwest, control floods of this watershed, store up water for the Southwest's cheapest electric power, provide fishing, sports and playground facilities for thousands of visitors.

Progress of the area has been tremendous. More than 15,000 farm and ranch homes have electric service. Austin has grown more than 60 per cent in each of the past decades, and its population, now well above 100,000, is officially estimated to exceed 140,000 at the next census, three and a half years away.

Utilization of raw materials and natural resources, and farm and ranch products for industrial production is making progress here in a favored region of Texas; and the constant flow of thousands of new residents and hundreds of thousands of tourists and visitors each year highlights opportunities for business and industrial development. Favorable state laws—no sales tax, no state income tax, no discrimination against outside capital—make this area and Texas attractive to the industrialist who wishes to serve a great and growing Southwestern market and who wishes to find a land of health and happiness in which to make his home.

FOR INDUSTRIAL BROCHURE,
pictures, detailed facts and figures, write:

AUSTIN CHAMBER OF COMMERCE
Austin, Texas



TEXAS CITY, TEXAS

(The Port of Opportunity)

A remarkably fast growing industrial area, where industries are expanding.

Principal Industries: Carbide & Carbon Chemicals Corp., Monsanto Chemical Corp., Tin Processing Corp. (only tin smelter on western hemisphere), Pan American Refining Corp., American Liberty Oil Co., Republic Oil Refining Co., Stone Oil Co., Southwestern Sugar & Molasses Co., Hanlon-Buchanan Company.

Major Seaport: Eleventh of all U. S. seaports in amount of cargo handled for years 1937 through 1941, and since VJ-Day tonnage showing marked increase.

On Intra-Coastal Canal. Excellent harbor with adequate loading and unloading facilities, compact railroad track and dock arrangement. Seatrains Lines, Inc., which transports freight cars to vessel and vice versa.

Railroads: Santa Fe, Southern Pacific, Missouri Pacific, Missouri-Kansas-Texas, Burlington-Rock Island and Texas City Terminal Railway Co.

Abundant supply of oil, natural gas and electric power available.

Population has tripled since 1940 and bank deposits have increased thirteenfold since 1936.

Industrial sites available with water frontage and railroad facilities.

For information write

MAINLAND COMPANY

or

CHAMBER of COMMERCE



FOR INDUSTRIAL SITES

TEXAS CITY

"Port of Opportunity"

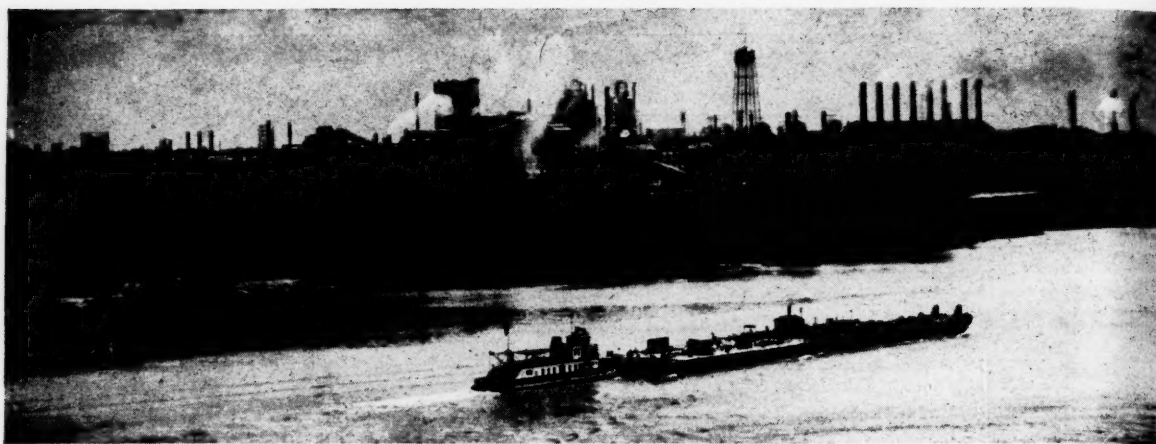
GATEWAY OF THE SOUTHWEST

FOR

GRAIN, METALS, ORES, PETROLEUM, PETROLEUM PRODUCTS
POTASH, SUGAR, SULPHUR

TEXAS CITY TERMINAL RAILWAY COMPANY

TEXAS CITY, TEXAS, U.S.A.



Above—A towboat pushes empty barges after unloading cargo at the Standard Oil plant located on the Mississippi River at Baton Rouge.

BATON ROUGE, the capital of Louisiana, is the deepest and farthest inland fresh water harbor in the world. Originally, Baton Rouge developed as a river port during the heyday of Mississippi River steamboat traffic, supplying transportation by water for agricultural products grown in the vicinity. Such it remained for many years.

In recent times, Baton Rouge has become second only to New Orleans as a Mississippi River port because the city is located on a river bank high enough to prevent flooding during high water and because the channel below the city is kept at 35-foot depth for the 240 miles to the Gulf, and above the city is dredged to a depth of nine feet for barge traffic. Thus Baton Rouge is the logical junction point for ocean-going and barge transportation.

A number of large industries have built plants there. Among these are the Standard Oil Company of New Jersey, the Ethyl Corporation, the E. I. du Pont de Nemours & Company, the Solvay Process Company, the Copolymer Corporation, the Mengel Company, the Consolidated

Chemical Industries, Inc., and the Aluminum Ore Company. Most recently, the Henry Kaiser interests have leased the enormous alumina plant built in Baton Rouge during the war. The city is now frequently referred to as the "chemical center of the South."

The city's fortunate position as the meeting-place of inland and deep-sea waterways is also demonstrated by its growth as a port. Not only does Baton Rouge rank second to New Orleans as a river port, but it ranks fourth among the Gulf ports with almost 7,000,000 tons of shipping each year.

Growth in population in metropolitan Baton Rouge since 1930 also reflects its commercial and industrial importance in the 1940's. In 1930 the population of Greater Baton Rouge, which includes Port

Allen across the river, stood at 48,729. In 1943 the directory issued by the R. L. Polk Company showed the population of the area to be 111,903. In 13 years Baton Rouge has grown more than 125 per cent in population, to become one of the South's metropolitan districts.

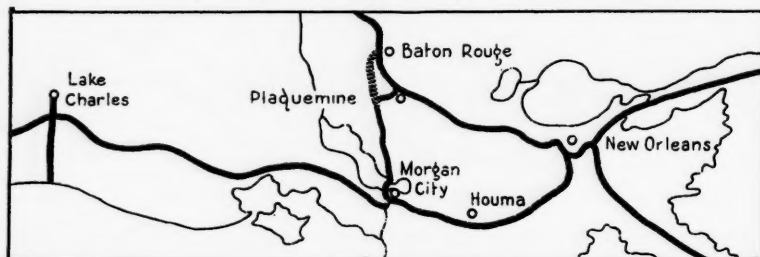
The city has not remained merely an exchange point for north-south river traffic. Largely through development of the oil reserves of Louisiana, and because of the presence in the southern part of the state of several large oil fields, refineries and depots, the east-west traffic at Baton Rouge has grown tremendously during the last several years.

This east-west traffic is handled by the Intracoastal Waterway, extending from Corpus Christi, Texas, to Apalachicola, Fla. Baton Rouge is an extremely important city to users of the Gulf Intracoastal Waterway, although it is not itself on the busy canal. The nearest point at which the canal joins the river is at Plaquemine, about 14 miles south of Baton Rouge by river, and at which point the canal is an "alternate route," and not the main waterway itself, which enters the river at New Orleans. This alternate route serving Baton Rouge by way of Plaquemine is not of the standard 12 foot

BATON ROUGE

—Deepest Fresh Water Harbor

Below—Proposed Baton Rouge route of Intracoastal Waterway.



depth and 125 foot bottom width of the Gulf Intracoastal Waterway, so that many large tows bound for Baton Rouge and points north of the city cannot use it, but must make, on their way from Texas, a circuitous route through New Orleans, thus increasing the distance by 150 miles and traveling against the river current for a good part of it.

What does Baton Rouge propose to do about this situation?

An extension of the alternate route is proposed to enter the river at a point directly opposite Baton Rouge. The Baton Rouge Port Development Association suggests this route as one half the job to be done to give the city the proper transportation facilities. The other half to be done is to widen and deepen the entire alternate route, and to increase the size of the locks, so that even the largest tows can come directly to the city.

The proposed extension would leave the existing Morgan City-Plaquemine cut-off at Indian Village where that canal makes an acute angle with its lower north-south course. The new route extends up the lower course of Choctaw Bayou for about two miles, where it enters a low swamp which it will traverse in a straight line due north to a point west of the selected site of its juncture with the river.

At this point a lock of 75 feet in width, 12 feet in depth below mean Gulf level, and 600 foot chamber length is proposed. This lock will form a part of the levee line along the right or west bank of the river, and is made necessary by the fact that the elevation of the river is generally considerably higher than the water in the streams in the alluvial

area protected by the levees.

The Association estimates that 90 per cent of the tonnage that now passes through Morgan City-Plaquemine cut-off is destined for Baton Rouge or points north of Baton Rouge. In 1943, this tonnage amounted to 3,287,303 tons, of which over three million represented petro-

leum products. Petroleum shipments through the cut-off have grown to this 1943 figure from a mere 300,000 tons in 1937. The Standard Oil Company of New Jersey at Baton Rouge alone accounted for over 900,000 tons annually during the past few years.

(Continued on page 234)



Below—A large ocean tanker rides at anchor as a towboat plies the waters of the Mississippi River.





Above—Patients' pavilion (left) and surgical building proposed by Johns Hopkins Hospital under a \$3,000,000 program for which funds are being raised. Architect for the project is James R. Edmunds, Jr.



Left — Nathan's, Galveston, Texas, clothing store, is erecting a new \$300,000 store for women across the street from the present location. Three stories high, the building will be air conditioned. Irving Klein, Houston, is the architect; Adolph Johnson, Galveston, the contractor.

South's Construction Totals \$764,004,000 in Five Months

by
Samuel A. Lauver

SOUTHERN construction at the end of the first five months of 1946 stands at \$764,004,000, or more than fifty-six per cent ahead of the value of contracts awarded for work below the Mason and Dixon line during the comparable period of last year.

The increase occurred despite the scarcities of materials, labor difficulties and the fact that renewed Federal restrictions have changed the complexion of construction from a general activity involving all types of work to mostly residential work, highway and engineering projects.

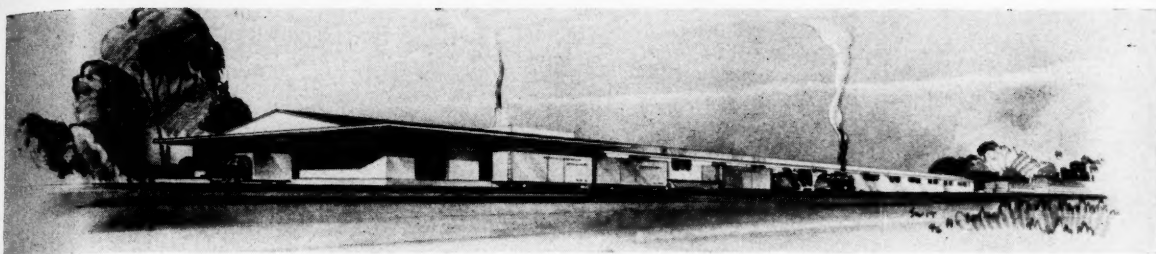
Industrial construction in the award stage, however, still occupies the highest position in the five-month statistical picture. Total for this type of work is \$189,463,000, with private building ranking a close second at \$174,381,000. Highway construction and heavy engineering work total \$156,647,000 and \$143,723,000, respectively.

Three of the categories of construction represent substantial increases in value over the figures of the first five months of last year. Private building is now seven times the total for the comparable 1945 period. Highway activity this year so far is almost four times that for similar period of last year. Heavy engineering has doubled.

The five-month industrial construction total of \$189,463,000 is about eighteen per cent lower than that of the similar period of last year. Industrial projects

Southern Construction By Types

	May, 1946		Contracts Awarded First Five Months 1946	Contracts Awarded First Five Months 1945
	Contracts Awarded	Contracts to be Awarded		
PRIVATE BUILDING				
Assembly (Churches, Theatres, Auditoriums, Fraternal)	\$ 2,522,000	\$ 8,885,000	\$ 15,028,000	\$ 3,714,000
Commercial (Stores, Restaurants, Filling Stations, Garages)	3,162,000	1,950,000	41,348,000	2,812,000
Residential (Apartments, Hotels, Dwellings)	49,111,000	15,418,000	110,115,000	16,576,000
Office	1,274,000	5,220,000	7,890,000	702,000
	\$ 56,069,000	\$ 31,473,000	\$174,381,000	\$ 23,804,000
INDUSTRIAL	\$ 25,074,000	\$ 36,506,000	\$189,463,000	\$232,387,000
PUBLIC BUILDING				
City, County, State, Federal	\$ 11,438,000	\$ 31,012,000	\$ 55,662,000	\$ 96,289,000
Housing	600,000	580,000	700,000	14,102,000
Schools	16,350,000	35,519,000	43,428,000	8,800,000
	\$ 28,388,000	\$ 67,111,000	\$ 99,790,000	\$121,191,000
ENGINEERING				
Dams, Drainage, Earthwork, Air- ports	\$ 8,978,000	\$ 21,794,000	\$106,492,000	\$ 50,248,000
Federal, County, Municipal Elec- tric	4,877,000	70,356,000	14,345,000	3,147,000
Sewers and Waterworks	6,681,000	10,636,000	22,886,000	17,040,000
	\$ 20,536,000	\$102,786,000	\$143,723,000	\$ 70,435,000
ROADS, STREETS AND BRIDGES	\$ 39,533,000	\$ 73,219,000	\$156,647,000	\$ 41,791,000
TOTAL	\$169,600,000	\$311,095,000	\$764,004,000	\$489,608,000



Above—Plant for the Strickland Furniture Co. being erected at High Point, N. C. About 60 by 800 feet, the building is of the standard fabricated steel type with masonry walls and built-up roof and steel deck, continuous projected commercial steel sash, according to Luria Engineering Corp., New York.

have been approved since issuance of the veterans' emergency housing order at the discretion of the Civil Production Administration.

Public building has slowed. The current five-month figure for the South is \$90,790,000 as compared with the \$121,191,000 for the similar period of last year. Public educational projects are valued at \$43,428,000; housing at a comparatively negligible figure.

The more immediate prospects of projects to be approved within the next 30 days have been defined by the Civilian Production Administration. This order will reduce the dollar value of authorizations by two-thirds because of the large volume of construction already under way or authorized and the unavailability of building materials.

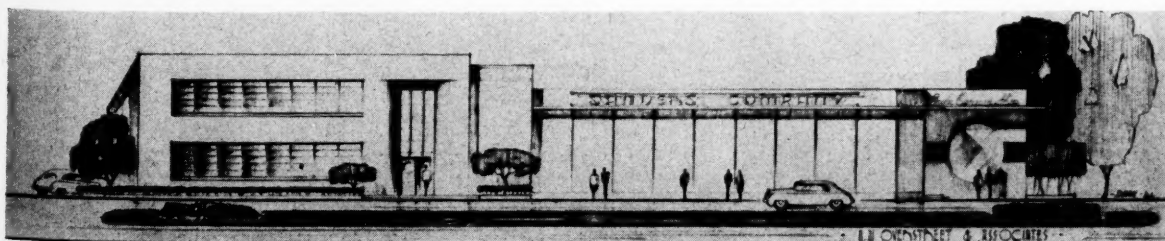
Essentiality and non-deferrability of projects must be clearly established under the new ruling. The yardstick by which the applications will be generally judged, as outlined by Civilian Production Ad-

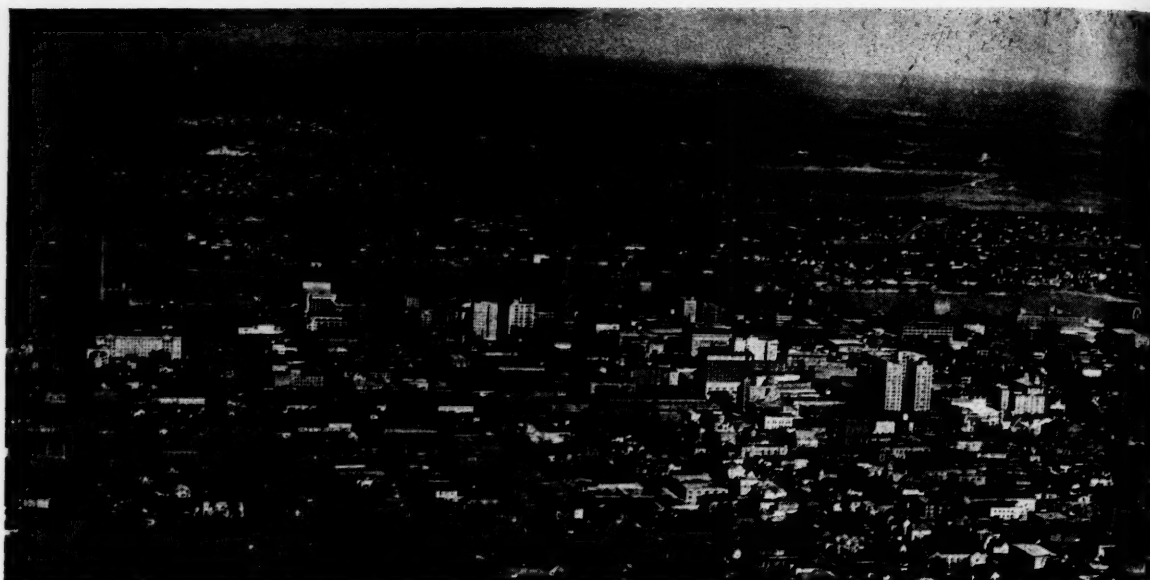
(Continued on page 226)



Below — Construction has been approved by the Civilian Production Administration of a \$350,000 office and sales building proposed by Sanders, Inc., Jackson, Miss., which will sell Mississippi manufactured products such as chenille, bed spreads, robes and women's clothing. Two stories high, the building will be of reinforced concrete, fireproof construction and will contain 46,000 square feet of floor space. Frame will be structural steel, floors concrete with asphalt tile finish, sash of steel. Heating will be by gas steam. Offices, cafeteria, show rooms will be air conditioned; air in other areas changed by fans. N. W. Overstreet & Associates, Jackson, are the architects and engineers; Currie and Corley, Raleigh, Miss., are the contractors.

Above—Maryland General Hospital, Baltimore, is raising \$1,000,000 for erection of a six-story addition to the present building. James R. Edmunds, Jr., is the architect.





Aerial View of Little Rock, looking North Across the Arkansas River to North Little Rock.

Little Rock's Unsuspected Riches

by

Inez H. McDuff

LITTLE ROCK, until recent years a timid "country cousin" among the larger Southern cities, found itself a year ago in the surprising possession of unsuspected riches, and the past year's growth has been so rapid and so spontaneous that even the people responsible for channeling it hardly realized that they had a planned program.

Yet like most chains of circumstance which seem to "just happen," there was a valid reason and an almost irresistible momentum behind this exceptional record of industrial development which is now becoming accomplished fact.

Within the past year 44 new industries representing investment of \$5,525,000 in buildings and equipment have been established in the Greater Little Rock area, and 22 existing industries have expanded by investment of \$688,000 in new plant and equipment.

The 1940 census of the United States Department of Commerce listed raw materials valued at \$23,167,019 which were converted into finished products during the preceding year in the Greater Little Rock area by the addition of \$8,925,112 in manufacturing processes in 133 plants by 3,981 workers.

Today's manufacturing and processing in the section, eliminating war production or war plant use, has doubled these figures in 240 plants.

No war plant is included in this list, since conversion of war plants for private industrial use has not yet been a factor in Little Rock industrial growth. Development of the Arkansas Ordnance Works at Jacksonville, 14 miles northeast of Little Rock, into a large industrial center is highly probable, but still in the future. The Maumelle Ordnance Works, 12 miles northwest of Little Rock, will be retained by the War Department on a standby basis.

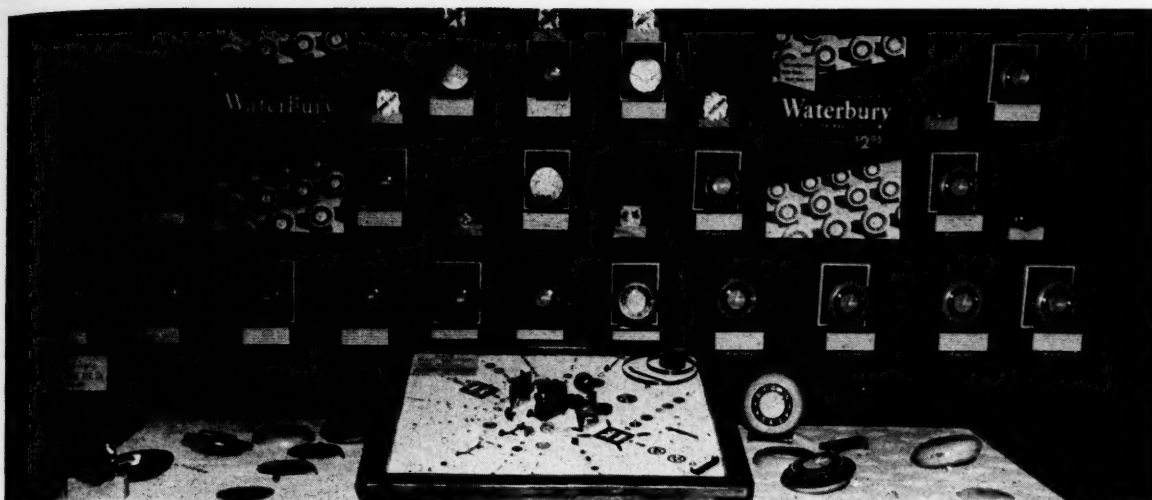
The \$50,000,000 Hurricane Creek alumina plant, leased from the government recently by the Reynolds Metals Company for production of alumina from Arkansas-mined bauxite, is not included in this new industry total, although its location in the bauxite mining section of Saline county places it near the Greater Little Rock industrial area.

The real riches of this central Ar-

kansas region are not in physical plant construction, but in accumulation between 1940 and 1945 of a large volume of liquid financial assets which make the use of outside industrial capital unnecessary, and in the training of a large body of agricultural workers in industrial skills. In addition, the exceptionally fortunate location of the city as a distributing center for the Southwest is of increasing value in the current Southwide industrial expansion, and the presence of a large volume of native raw materials has supported the expansion program.

Without fanfare or trumpeting, without advertising or subsidization, and for many of the city's business leaders without the expectation of the past year's swift growth, these three factors are largely responsible for an exceptionally high percentage of industrial expansion.

The liquid assets provide a sound and fundamental reason for a permanent change in the region's economy. Frederick L. Deming of the Federal Reserve Bank of St. Louis reported in his recent financial survey of Pulaski county that "the large volume of liquid assets held in the community should make it unnecessary to go outside the region for



Above—Alarm clocks manufactured by the Little Rock plant of the United States Time Corp. Extensive expansion has been approved by the firm's board of directors. The original goal was 7,500 units daily.

venture capital if it is needed. * * * For the first time in its history the Little Rock region, in fact the whole state of Arkansas, is close to being financially independent of outside capital for development."

Basis for this statement is the 147-million-dollar increase in liquid assets of Greater Little Rock and Pulaski county between 1940 and 1945—141 million dollars in actual increase of liquid assets and six million dollars in reduction of outstanding debt. Liquid assets held by individuals total 111 million dollars.

Manufacturers and potential manufacturers have sufficient funds to finance all necessary reconver-

sion expenditures and to provide working capital for peacetime production. Retailers and wholesalers have enough liquid assets to meet needs for increased inventories, and banks can meet demands for legitimate credit and welcome the chance to increase their volume of good loans.

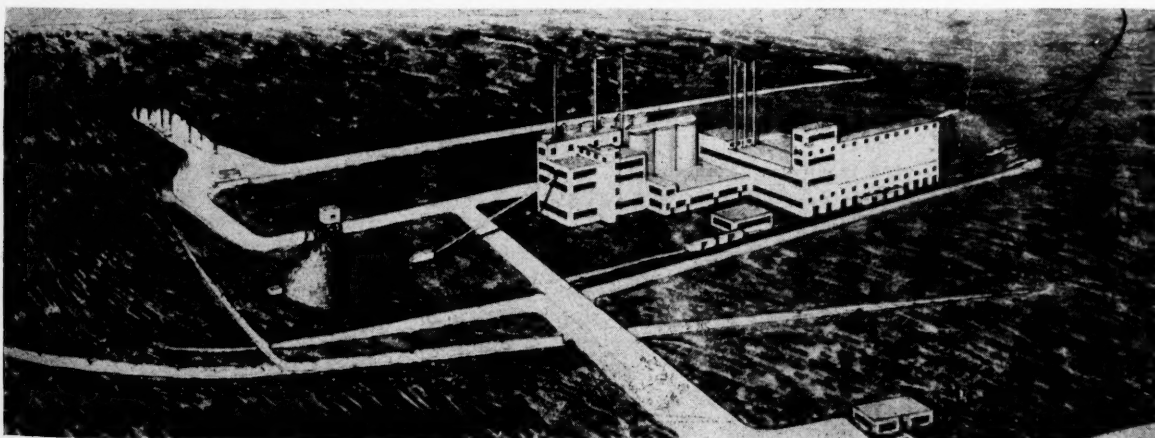
This exceptionally high rate of increase in local financial resources is set within the framework of the entire state's high rate of increase in financial liquidity, amounting to 965 million dollars between December, 1939 and June, 1945. Decrease in outstanding debt in the entire state during that period was 24 million dollars, bringing the total li-

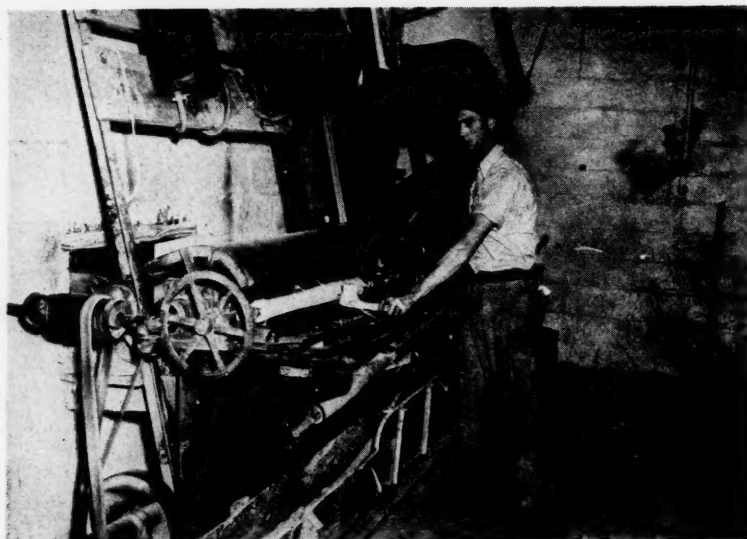
quidity gain to 989 million dollars and providing greatly increased local capital for statewide industrial growth.

First factor in this high rate of industrial growth was the presence of money to do the job.

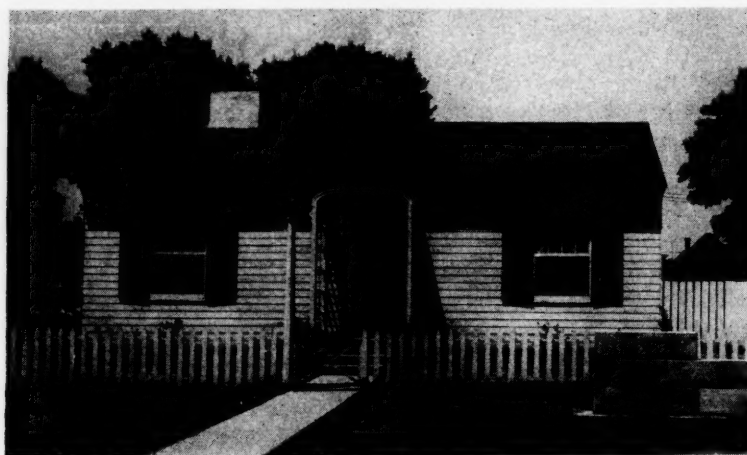
Solution of the question of labor grew out of the industrial adaptability of Arkansas agricultural workers, a 96 per cent native population stemming from several generations of farm and small-town people, who proved during the war that they can respond satisfactorily to industrial ways and wages. Ford, Bacon and Davis, builders and operators of the Arkansas Ordnance Works for the government, enthusi-

Below—Sketch of the \$1,500,000 roofing granule plant being built near Little Rock by Minnesota Mining and Manufacturing Co. Annual production is estimated at 125,000 tons. About 100 acres of granite deposits will supply the plant.





Above—Making baseball bats at the plant of Southwest Handle & Manufacturing Co., Little Rock.



Above—A Model House of Bralei Homes, Inc.

Below—Phelps Manufacturing Co., Little Rock, makes the blower and exhaust fan used in the cotton gin air blast systems.



astically praised Arkansas farm and small-town workers for their skills, adaptability and their consistently high level of dependable employee conduct, and many manufacturers in other states have heard of Arkansas labor through this nationally known firm of industrial engineers.

Location, the third important factor, has proved of strategic importance both to large manufacturers who are joining the nationwide movement to decentralize and to local operators who seek to establish small new industries or expand existing plant. Distributors are equally analytical in studying the city's location. For all three groups Greater Little Rock has much to offer. It is on four major U. S. highways, three major railroads and three major airlines on the most direct route of travel from the Southwest and central South to the North and East. Dredging and maintenance of a nine-foot navigable channel in the Arkansas River has been recommended by the United States Engineers in their Arkansas River Valley Development Plan incorporated in legislation now pending in Congress, the Rivers and Harbors Projects bill.

Twenty trucking companies operate through the city and many maintain divisional or central headquarters here. The entire Little Rock area is accessible overnight to huge new expanding markets of the entire central South and Southwest, and to southern export outlets. (See map.)

And finally, the state's own raw products are being utilized extensively for the first time in this home-grown industrial program which was started by local people who found a foothold or a new outlet by using what they already had, in the location where they found it.

Of the 44 new industries located in the Greater Little Rock area during the past year, 24 are using Arkansas-grown timber and Arkansas-manufactured lumber from the state's annual production of one and one-half billion board feet to make factory-built fabricated homes, folding chairs, folding screens, partitions and enclosures, radio cabinets, juvenile furniture, baseball bats, living room and bedroom furniture, kitchen equipment, factory-built ga-

(Continued on page 236)

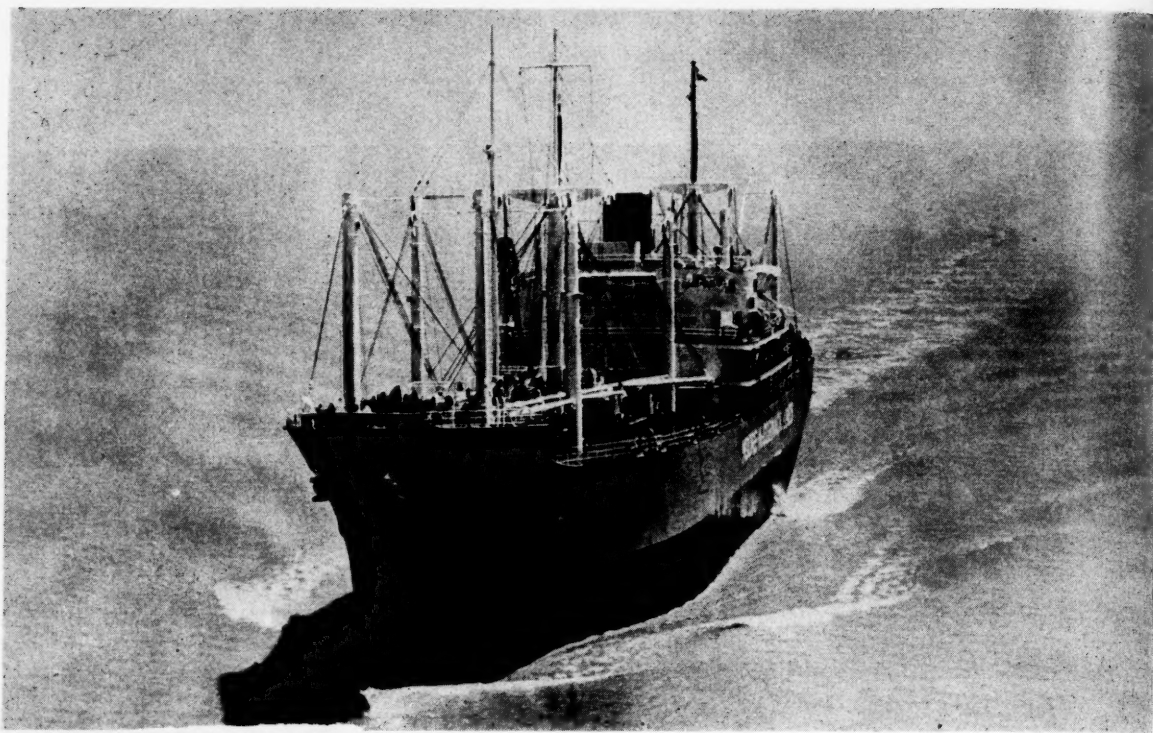
The **DEPENDABILITY of REED ROTARY DRILLING TOOLS**

**REED RESEARCH • REED ENGINEERING
REED MANUFACTURING EXPERIENCE**

**under the Reed policy of
close cooperation with the men in the oil industry.**

Making the tools the oil industry needs and making
them well has made the name "Reed" a symbol of
progressiveness and reliability in every oil country.

**REED ROLLER BIT
COMPANY**



Above — Mormacgulf, 492-foot Pascagoula built passenger liner, on her first blue water voyage.



Left — Spaciousness and comfort for passengers are emphasized in the Mormacgulf's design.

Below — The massive machinery that drives the 17,600-ton Mormacgulf through the water at 17.5 knots an hour.



Pascagoula Built Ship Makes First Voyage

THE Mormacgulf, first of a fleet of seven fast cargo-passenger vessels to be delivered by The Ingalls Shipbuilding Corporation to Moore-McCormack Lines, recently sailed from New York for Bahia, Rio de Janeiro, Montevideo and Buenos Aires.

Four of her sister ships—Mormacisle, Mormacdown, Mormacland and Mormacmail — already have been launched at the Ingalls yard in Pascagoula, Miss., with the Mormacpenn and Mormacsaga scheduled to go down the ways in the near future in order that all may be delivered by the end of the summer.

The seven vessels being constructed for Moore-McCormack are a part of \$100,000,000 worth of
(Continued on page 242)

COTTON INSULATION

is 4% to 36% more EFFICIENT!



Says the ARCHITECT

"The superiority of cotton as an insulator is obvious. It is more efficient in every way, with lifetime durability. I specify Cotton Insulation because I know that it backs up every inch of my best judgment."



Says the BUILDER

"The homes I build are modern, which means that they're insulated with the best material on the market—Cotton Insulation. The building dollars I invest in it are quickly returnable, for Cotton Insulation helps sell houses."

Tests of every kind—laboratory and in use—establish Cotton Insulation as definitely superior in every phase of efficiency.

IT HANDLES BETTER

Compressed in its container—no waste in transportation or storage. Uniform in density—no doubt about value received. Cotton Insulation is free from abrasive particles—cannot harm skin or clothing.

INSTALLATION EASIER AND QUICKER

Although available through competent applicators, Cotton Insulation is so simple to install that anyone can do it with ease. It unrolls like a rug. No special equipment is needed.

REDUCES WEIGHT

Cotton Insulation is snowy-light—weighs about 220 pounds per thousand square feet—three inches thick. It decreases thickness too—provides equal insulation value with 20% to 25% less bulk than some comparable insulating materials.

NEVER SETTLES—NEVER PACKS

The efficiency of Cotton Insulation increases with age. Heat and vibration, which may cause some insulations to settle and lose effectiveness, tends to fluff Cotton Insulation to a greater thickness and it becomes more efficient than before. The durability of Cotton Insulation is lifetime.

EXCEEDS ALL TECHNICAL REQUIREMENTS

Cotton Insulation refuses to burn—only chars—when a 1600° F. flame from a blowtorch is applied to it for a period of 20 minutes. It repels insects and vermin and sheds destructive moisture. No priorities are required. Included in standard specifications of FHA and FPHA. Cotton Insulation transmits less heat per inch of thickness than any other insulation material commercially available today.

MADE TO U. S. GOVERNMENT STANDARDS

Cotton Insulation is fabricated to conform to the specifications of the United States Department of Agriculture. All production, including the vapor barriers, is inspected, approved and certified by trained government inspectors.

For more detailed information and a full account of government tests of amazing product, write to—NATIONAL COTTON COUNCIL, Box 18, Memphis 1, Tenn., for the booklet "Cotton Insulation."



Says the CONTRACTOR

"My installation problems are over! Cotton Insulation is so easily and quickly installed. In these days of labor shortages, this really means something to me—lower labor costs and fewer man hours—and it surely does the work."



Says the DEALER

"The many advantages offered by Cotton Insulation make it easy to sell. Its blankets are packaged—rolled in clean sections—no waste, handled with ease, and profitable! It brings lasting comfort and its price fits into any family budget."

NATIONAL COTTON COUNCIL OF AMERICA

COTTON INSULATION ASSOCIATION

FOR OFFICIAL GOVERNMENT TESTS WRITE NATIONAL COTTON COUNCIL, BOX 18, MEMPHIS, TENNESSEE

Southern Industrial Expansions

ALABAMA

BIRMINGHAM—Station and Laboratory—Birmingham Gas Co. plans compressor station and laboratory building; Pacey & Long, Martin Bldg., Archts.

GAIDEN—Bus Station—Crescent Stages, Anniston, received low bid of \$12,500 from Brice Building Co., Birmingham, for masonry and concrete addition to bus station; Greer, Chamber & Holmquist, Birmingham, Archts.

LEEDS—Factory—J. Solomon let negotiated contract to Daniel Construction Co., Birmingham, for construction of garment factory; 125x200, concrete floor, masonry and steel construction, cost approximately \$100,000.

ARKANSAS

HARRISON—Packing House—C. N. Hudson plans packing house to cost \$58,000.

FLORIDA

BRADENTON—Plant—Southern Gas & Electric Corp. let contract to Stacey Brothers Construction Co., Cincinnati, for gas manufacturing plant with daily capacity of 1,200,000 cu. ft.; \$125,000.

CLEARWATER—Canning Plant—Bilgore Products, Inc., St. Petersburg, let contract at \$250,000 to Albert Haworth, Tampa, for citrus canning plant.

DAYTONA BEACH—Building—Southern Bell Telephone & Telegraph Co. plans telephone building; approximately \$360,000.

FORT MEADE—Mine—Swift & Co. has CPA approval for phosphate mine, cost \$280,000; includes construction of buildings and furnace for the mine.

JACKSONVILLE—Plant—Niagara Sprayer & Chemical Division of the Food Machinery Corp. let contract to E. C. Kenyon, Jacksonville, for construction of manufacturing plant.

MIAMI—Truck Terminal—Southern Brokerage Co., 1890 NW 7th Ave., let contract to East Coast Builders, 654 NW 79th St., for one and two-story truck terminal at 2100 block NW 11th avenue.

MIAMI—Truck Terminal—Southern Brokerage Co., 1890 NW 7th Ave., let contract at \$12,000 to East Coast Builders, 654 NW 79th St., for truck terminal at 2100 block NW 11th Ave.

SARASOTA—Gas Plant—Southern Gas & Electric Corp. let contract to Stacey Brothers Construction Co., Cincinnati, for gas manufacturing plant, daily capacity 1,200,000 cu. ft.; cost \$125,000.

TAMPA—Manufacturing Plant—Kieckhefer Containex Co. received bids for manufacturing plant to cost \$80,000.

ZELLWOOD—Mill—Ramie Mills of Florida, Inc., Richard Whitney, president, has started construction of mill for processing of ramie.

GEORGIA

BAXLEY—Plant—Applying Frozen Food & Storage Co. plans freezing locker plant; cost \$35,000; C. T. Baker, Atlanta, Archt.

DUBLIN—Woolen Mill—C. M. Guest & Sons, Anderson, has contract for woolen mill building, J. E. Sirrine & Co., Greenville, S. C., Engrs.

MACON—Plant—Benedict Bedspread Manufacturing Co., Putnam, Conn., plans bedspread plant; cost approximately \$50,000.

PORT WENTWORTH—Plant—Southern Paperboard Corp. has filed application with U. S. Engineer Office for permission to do dredging and dock work for proposed paper mill on the Savannah River; Gair Woodlands, a subsidiary of the company, has acquired more than 10,000 acres of timber land in Appling and Jeff Davis counties.

SAVANNAH—Chemical Plant—General Chemical Co. let contract at \$50,000 to Span-Worrell Construction Co. for chemical plant.

KENTUCKY

LOUISVILLE—Shop—Louisville Railway Co. plans bus-repair shop, 29th and Broadway.

LOUISIANA

HARVEY—Warehouse—Joseph Cazabon, Supt., Jefferson & Plaquemines Drainage District, received bid from T. C. Bruns, 817 Charles St., for warehouse building.

MONROE—Building—Ford, Bacon & Doyle has contract to add extra story to building of Faulk-Collier, approximately \$50,000.

NEW ORLEANS—Awning Company Building—C. Bel Awning Co., let contract to Bernard & Byrd, Interstate Bldg., for 2-story building to be erected on Tchoupitoulas and Ninth Sts.; to cost \$64,495.

NEW ORLEANS—Building—New Orleans Public Service, Inc., Barronne and Union Sts., Purchasing Agent, received bids for new 3-story shops and office building at Market St. Generating Plant on S. Peters and Richards St.

NEW ORLEANS—Addition—The Lane Mills, 434 Cadiz St., let contract to George J. Glover Co., Inc., for new warehouse addition on Valence St.

OAKDALE—Auto Building—Charles T. Roberts, Guaranty Bank Bldg., is preparing plans for renovation of Ford Motor Co. building, occupied by Scott-Cain Motor Co.

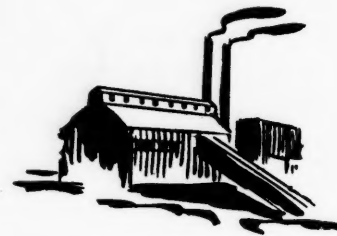
MARYLAND

BALTIMORE—Plant—City Council passed ordinance allowing transfer of Calvert Station property to be used as site for modern publishing plant for "Sunpapers."

BALTIMORE—Building—The Kelco Manufacturing Co., 4020 E. Baltimore St., has plans in progress for building, 2015 E. Baltimore St.

BALTIMORE—Building—C. M. Athey Paint Co., 500-04 S. Hanover St., has excavation completed and foundation work being done by Raymond Pile Co., Mercantile Trust Bldg., for new factory, Bayard & Bergundy Sts.; Charles R. Scrivener Co., 339 St. Paul Place, Gen. Contr.; Grinnell Co., Garrett Bldg., has contract for water sprinkler system; Henry Powell Hopkins, 10 E. Mulberry St., Archt.; James Posey, 10 E. Pleasant St., Mechanical Engr., and Van R. P. Saxe, 100 W. Monument St., Structural Engr.

BALTIMORE—Addition—Consolidated Gas, Electric Light & Power Co. plans addition to



generating plant, \$6,500,000; General Electric Co. furnishing turbine.

BALTIMORE—Warehouse—J. Paul let contract to Harford Contracting Co. for warehouse, 400 N. Eden St.

BALTIMORE—Building—Eastern Venetian Blind Co., 3501 Brehms Lane, has selected site, Erdman Ave., near Pulaski Highway, for erection of plant building.

BALTIMORE—Addition—Davison Chemical Co. let contract to Consolidated Engineering Co., 20 E. Franklin St., for addition to plant, E. S. Curtis Creek; cost \$20,000.

BALTIMORE—Building—Nicholas Detorre let contract to Vincent C. Galluzzo, 209 S. High St., for building, 2227 Huntington Ave.

BALTIMORE—Building—Franklin Metal Products, 1910 Winchester St., has selected site, Winchester St., for building.

BALTIMORE COUNTY—Airport—Harold Ford, 1005 Cord St., Baltimore 20, has plans in progress for seaplane airport.

SPARROWS POINT, BR. BALTIMORE—Building—Bethlehem Steel Co. has plans completed for furnace building, cost \$57,000.

SPARROWS POINT, BR. BALTIMORE—Mill—Bethlehem Steel Co. has completed plans for hot strip mill, cost \$335,000; metal; one-story; 108x975.

SPARROWS POINT, BR. BALTIMORE—Bethlehem Steel Co. has completed plans for warehouse, cost \$163,000; metal; one-story; 90x7,000.

SPARROWS POINT, BR. BALTIMORE—Motor Room—Bethlehem Steel Co. has plans completed for motor room, cost \$165,000.

MISSISSIPPI

COLLINS—Locker Plant—Canfield's Grocery & Market plans installation of frozen food locker plant which will provide complete services of processing and quick freezing; 280 lockers.

DREW—Buildings—City, City Clerk, re-

ceived bids for construction of new one-story and basement monolithic concrete garment factory building.

GREENWOOD—Radio Equipment—City received bids for frequency modulation equipment complete with one 250-watt station transmitter, two remote control consoles and nine frequency modulated transmitter receiving units.

LIBERTY—Garment Plant—Amite County Supervisors District No. 4 will hold election to vote on \$100,000 bond issue for garment plant to provide employment for 400 persons.

MERIDIAN—Warehouse—Staf-O-Life Milling Co. let contract to B. L. Knost at \$60,000 for construction of concrete block warehouse.

NETTLETON—Factory—Town voted issuance of bonds for erection of garment plant to be operated by newly organized Nettleton Garment Co.; 50x160 ft.; A. K. Reed, Pres. of Corp.

NEWTON—Factory—R. W. Naef, Jackson, Archt., is preparing plans for new garment factory building which will be leased to Newton Co., a subsidiary of the I. C. Isaacs and Co., of Baltimore, Md., to cost \$150,000.

PITTSBORO—Garment Plant—Calhoun County Supervisors District No. 4 approved \$30,000 bond issue to provide half of \$60,000 needed for joint industry with supervisors District No. 1 for facilities for garment plant.

MISSOURI

ST. LOUIS—Factory, Etc.—Industrial Engineering & Equipment Co., 711 S. Theresa, has plans in progress by Shapiro & Tisdale, 705 Chestnut St., Archt., for factory and warehouse.

ST. LOUIS—Factory, Etc.—Westinghouse Electric Corp., Pittsburgh, Pa., will construct one-story factory and warehouse, 1515-45 S. Vandeventer, cost \$590,000.

ST. LOUIS—Factory—America Rubber Stamp Co., 1424 Olive St., let contract to Brockmeyer Construction Co., 634 N. Grand Boulevard, for factory, 1456 North Market St., cost \$15,000.

NORTH CAROLINA

APEX—Building—Berol Pen Co. received low bid of \$120,156 from Atlantic Building Co., Charlotte, not including structural steel, steel sash, steel deck, electrical work, or sprinkler system, for proposed manufacturing plant.

NEW BERN—Power Plant—City received bids for power plant structures.

WAKE COUNTY—Building—Burlington Mills Corp., Greensboro and Raleigh, let contract to J. A. Jones Construction Co., Inc., Charlotte, for building for Neuse River Finishing Plant.

WILMINGTON—Plant—The Sinclair Oil Co. completed purchase of 1,000-foot frontage on Cape Fear River in Wilmington, and plans \$750,000 storage terminal on site.

SOUTH CAROLINA

SENECA—Plant Extension—Utica & Mohawk Cotton Mills, Inc., let contract to Daniel Construction Co., Inc., Greenville, for plant extension.

TENNESSEE

KNOXVILLE—Radio Facilities—Department of Commerce, Civil Aeronautics Administration, 34 Marietta St., N. W., Atlanta, 3, Ga., let contract to Frontenac Construction and Engineering Co., Chicago, Ill.

KNOXVILLE—Addition—National Plastics, Inc., constructing addition to plant; manufactures plastic-molded articles for use in textile machinery.

SOMERVILLE—Plant—Weil-Kalter Manufacturing Co. of St. Louis planning new plant at Somerville; two-story, 112 x 145 feet, housing both cutting and sewing operations.

TEXAS

Gas Pipelines—Federal Power Commission authorizes El Paso Natural Gas Co., Southern California Gas Co., and Southern Counties Gas Co. to construct and operate 1,200-mile, \$70,000,000 natural gas pipeline from Texas Panhandle to Los Angeles area; facilities include 737 miles of 26-inch pipeline extending from Eunice, Lea county, Tex., to California-Arizona state line near Blythe, Calif.; a 251-mile extension of 24-inch transmission line from Dumas, to Eunice Plant in New Mexico; compressor stations with an aggregate in the final stage of 129,800 HP; five connecting lateral lines in the Permian Basin in New Mexico and Texas; three gas purification and

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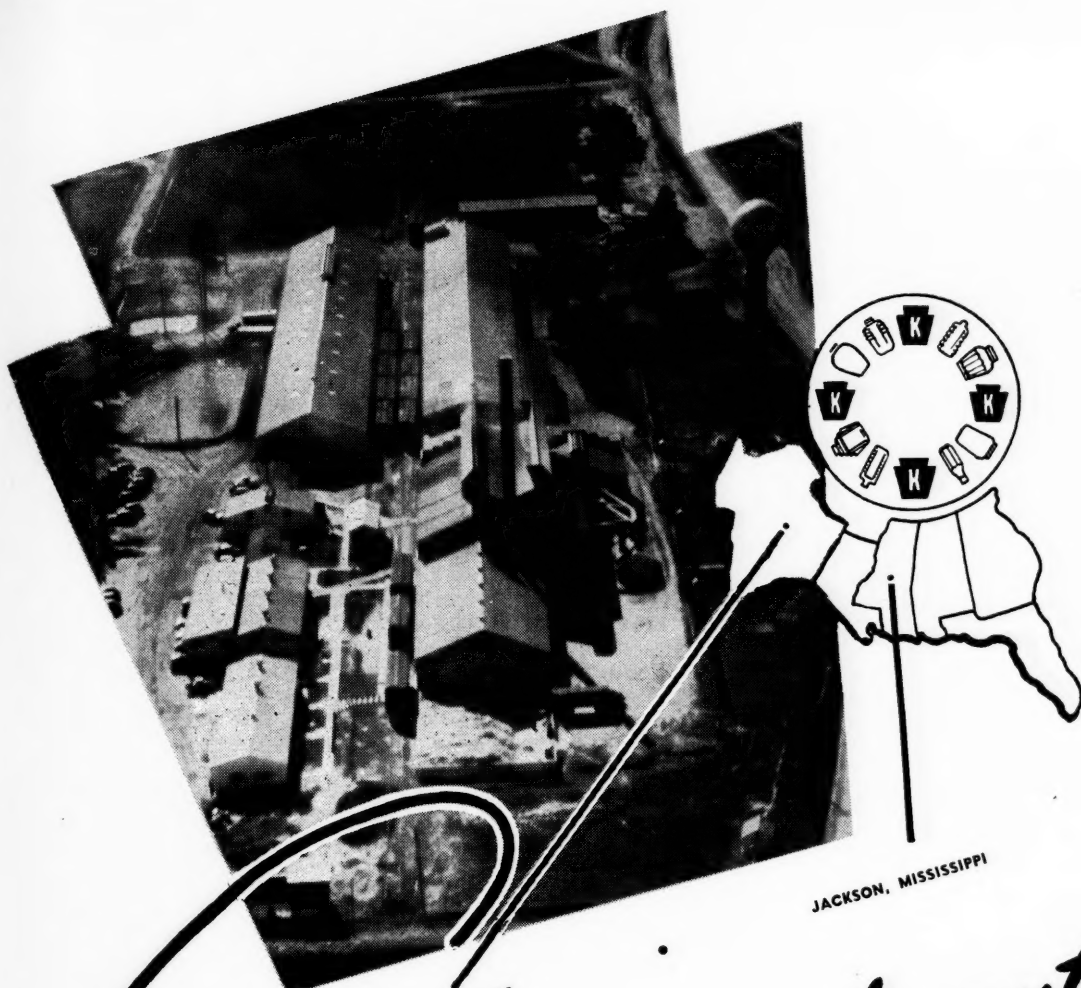
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PALESTINE, TEXAS

JACKSON, MISSISSIPPI

Situated to serve the south

2 Knox Plants located advantageously across the South assure quick, economical supply and service to all Southern users of glass containers. Knox better glass containers can reach all areas in the developing new South faster and more economically. The Knox staff of skilled technicians can help you solve your glass packaging needs—they can give you promptly the benefit of years of Knox training and experience. Knox is situated to serve the South!

KNOX GLASS BOTTLE CO.

Palestine,
Texas

Jackson,
Mississippi

EVERY **KNOX** *Container* **A BOOST**
K
FOR YOUR PRODUCT

TUNG nut oil, end product of the tung tree, is not new to American industry in its finished form. Over 100,000 acres were planted to tung trees in 1937, last year for which figures are available, with reliable estimates showing a probable doubling of acreage since that date.

One of the outstanding features of Southern development has been a readiness and eagerness to reach out for new products which hold promise. Not least among these is tung oil. For a considerable number of years its place in the paint and coating industry has been particularly strong. Its all out production as a completely American product, however, is of comparatively recent origin, and is the result of the enterprising foresight of Southern businessmen.

In the years before the recent war, the United States annually imported tung oil from China in quantities approximating 120,000,000 pounds. So great was the concern felt over the curtailment of this import by Japanese aggression that use of tung oil was restricted by Presidential order to purely military objectives. Even now that the war has ended, that cause for concern has not been eliminated. Many of China's tung groves were damaged beyond immediate repair and will require a number of years to recover their prewar productivity.

The South presents the only bright spot in the situation with the promising aspect of its tung orchard projects. These, though still in their infancy, are already turning out sizeable production and filling the most urgent needs of the industries dependent upon this material.

Why is tung oil rated so highly? The answer lies not alone in the fact that it is an oil, and that there is a general scarcity of all oils, but also in tung oil's peculiar qualities for which no equivalent substitute has been found.

Substitutes do exist, just as substitutes can be found for practically any known material, but for a number of purposes these substitutes fall far short of tung oil performance. One of the reasons for American industry's success has been its insistence upon the use of the best available material for each particular purpose. The American paint and

varnish industry is insistent upon obtaining tung oil for certain purposes as long as there is any chance of its being available.

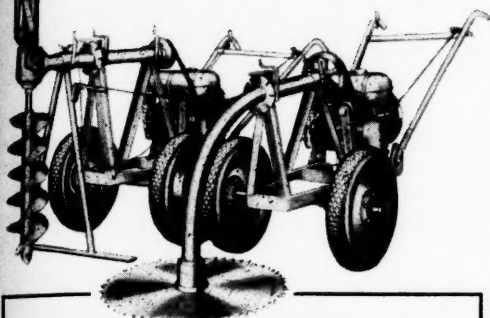
The U. S. Bureau of Foreign and Domestic Commerce says that tung oil is an essential raw material, the best drying and waterproofing oil of vegetable origin known to technical science. The paint industry, through its national organization, the Paint, Varnish and Lacquer Association, asserts that tung oil cannot be replaced successfully in a number of coating agents and that, besides these vital uses, it is valuable in the manufacture of linoleum and oil cloth, printing inks and a number

of miscellaneous commodities. The electrical industry reports tung oil as essential in the manufacture of certain insulating compounds used in dynamos, cables and wire coating. The oil is an important ingredient in automobile brake linings. It is being used in gaskets for steam pipes, pumps and engines. The undercoats of most automobile finishes contain tung oil in some form. It is also widely used in waterproofing various types of fabric, such as those used in raincoats and balloon outercovers. It has been utilized to a considerable extent for waterproofing cartridge shells and similar products requiring such protection.



South Holds Promise As Tung Oil Producer

JAQUES LABOR SAVING MACHINES



JAQUES JR. POST-HOLE DIGGER

HOLE DIGGING is easy, fast, economical and efficient with the JAQUES JUNIOR POST-HOLE DIGGER. In ordinary ground, it bores 9" hole three feet deep in sixty seconds or less. Can be operated by one man. Throws dirt out leaving hole clean. Complete, F.O.B., Denison . . .

\$398.00

JAQUES JR. PORTABLE POWER SAW

It's easy to clear land of brush and trees, with a JAQUES JUNIOR PORTABLE POWER SAW. Its 30" unbreakable saw, powered by 5 to 6 h.p. engine zips through brush and trees in seconds, cutting them off level with ground. Once tree is felled, angle of saw can be changed quickly to trim and cut tree to any desired length. Price of saw, complete, F.O.B., Denison, is only . . .

\$379.50

SAVE \$200 ON COMBINATION

If you prefer, you can buy the SAW complete with frame and engine for \$379.50 and the Post-Hole Digger attachment, which is interchangeable with saw, for \$198.00 extra. Switch from Saw to Post-Hole Digger can be made in about five minutes.

TRACTOR MOUNTED SAW

For the bigger clearing jobs inquire about the JAQUES TRACTOR MOUNTED SAWS.

Do the Job QUICKER • BETTER

If it's a big job like constructing a telephone, power line, or drilling foundation holes, THE JAQUES HYDRAULICALLY CONTROLLED EARTH BORING MACHINE below will do the job faster, easier, and better—at a saving in time, manpower, and cost. Note some of its principal features:

1. ALL PLUMBING is hydraulically controlled, enabling faster operation and transportation from hole to hole as machine can be instantly lowered to traveling position, and again quickly placed in operating position regardless of the unevenness of the terrain.
2. FASTER DRILLING, as the hydraulic feed maintains a constant pressure on the bit maintaining the maximum R.P.M.'s on the auger without the slipping of any clutch or gears. The texture of soil controls the rate of digging.
3. HYDRAULIC PRESSURE on bit transmits less shock to machine while digging in rock or other hard-to-drill soils.
4. HYDRAULIC FINGERTIP CONTROL reduces operator fatigue to a minimum.
5. ONE MAN easily operates this machine as all controls are conveniently located.
6. PEAK OPERATING maintained hour after hour with these simple trouble-free hydraulic controls.
7. HOLES CAN EASILY be drilled at any angle.

ENGINE—Industrial Type Gasoline, approximately 30 h.p. S.A.E. Rating, with starter, generator, and battery. UNIT—mounted on steel-I-beam skids (Easily attached to or removed from truck or other conveyance). DRIVE—MECHANICAL—four forward speeds and one reverse. FEED—HYDRAULIC. LIFT—HYDRAULIC. LEVELING—HYDRAULIC. HOLE SIZE—Up to and including 24 inches. (Larger diameter on special order). DEPTH OF HOLE—8 to 9 feet with standard machine (greater depth on special order). WEIGHT—Approximately 3900 pounds. WIDTH—4 feet, 3 inches; LENGTH—10 feet.



JAQUES

POWER SAW CO.
Highway 75 Denison, Texas



A Constitutionally Controlled Budget

by

Millard E. Tydings

*United States Senator from
Maryland*

RECENTLY there has come to the fore more and more public support for a balanced budget in peace time. We all know that it is not possible to make the government's income meet its expenditures in time of war. However, when war is at last behind us it becomes very important that thereafter the national debt be not increased—that the government then commence to live within its income.

There has been widely heralded in some parts of the press a statement signed by a number of senators and representatives of both parties of which I was one, supporting the objective of balancing the budget at the earliest possible moment.

This statement was prepared not in Congress but by a citizens committee which has been supporting the objective of the balanced budget for some time and which has played a large part in arousing the public to the importance of this matter.

This statement issued by a group of senators and representatives was patterned on the general proposition of a constitutional amendment for an automatically balanced budget in peace time. I introduced this proposed amendment in the Senate sometime ago.

Because of the war the thought of a balanced budget was temporarily laid aside but it is now again coming to the fore and if wide public support continues to grow in its behalf there is a fair prospect that this idea will ultimately become the law of the land.

Generally, here is the picture. Under the present law and conditions the only force that can bring about a balanced budget is voluntary, not compulsory, action by the Congress. There is no prohibition either in the Constitution or in the law of the land which compels the Congress to live within its means in peacetime. Congress can continue to spend more than it takes in forever so far as any restraint upon Congress is contained in either our Constitution or our laws. Obviously, if the idea that the Congress should not spend more than it takes in in peace time is to become the nation's

policy then Congress must be prohibited from violating this policy.

To accomplish this a constitutional amendment is necessary. Nothing else will do the job. Congress cannot pass a law contrary to the Constitution of the United States. It can repeal and amend any mere law it passes compelling it to live within its means if there is not constitutional restraint forbidding it to spend more than it takes in in peace time. So, if we were to pass a law forbidding Congress to appropriate more than it takes in in peace time, as the Constitution now stands, any succeeding Congress could repeal or amend the law and hence it would be of no value.

On the other hand, if there is a constitutional amendment which forbids Congress from spending more than it takes in in peace time Congress can do nothing about it and will thereafter be compelled to make its income and its expenditures balance.

That is why I have introduced in the Senate a Constitutional amendment to accomplish this desired re-

sult. That amendment is now pending before the Committee on Appropriations of the Senate. As a matter of realistic thinking, however, this amendment will be adopted only if the citizens of the country show in sufficient numbers that they think such a course is wise and desirable for the welfare of our country.

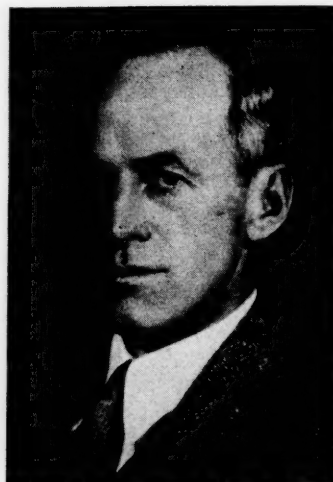
One of the greatest assets in this struggle to get this amendment in substance adopted is the work of Citizens' Committees, working in various states to obtain a method of retraining Congress in appropriating vast sums of money in peace time which it does not have in the Treasury. These organizations have been invaluable. The Maryland organization has been in the forefront of this important work. Organizations of interested citizens in many states are lending this movement for a balanced peace time budget their very considerable support. A number of state legislatures have passed resolutions expressing their approval, and some of these Legislatures now in session have the proposal before them. Such a proposal if adopted will help every one immeasurably.

It makes no difference whether a man be rich or poor, banker or laboring man, farmer or industrialist, each and every person has an enormous prospect of gain whenever this government lives within its income.

Here are a few of the reasons: The smaller the national Government's debt is, the less taxes the average citizen is called upon to pay. It will take from five to eight billion dollars a year hereafter just to pay the interest on the national government's debt. Think of it! That sum alone is more money than our whole national government took in from every source in any year preceeding 1936 in the whole history of this nation.

Now, if we had no debt at all, it would mean that from five to eight billion dollars a year in necessary taxes to pay the interest on this debt would not have to be collected. If we had no debt and did not need these extra taxes, we could reduce

(Continued on page 224)



Senator M. E. Tydings

Specify Continental

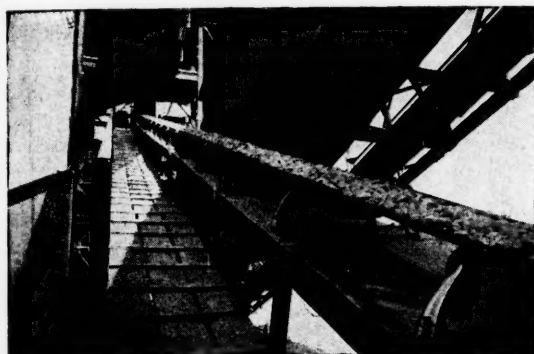


Materials Handling

and Power Transmission Equipment

SERVING— Coal Mines — Steel Mills — Paper Mills — Textile Mills — Cement Mills — Chemical Plants — Sand and Gravel Plants — Quarries — Power Plants — Public Utilities — Railroads — Grain Elevators — Cottonseed Oil Mills — Cotton Gins — Aluminum and Magnesium Plants — Canneries — Phosphate and Potash Mines — Fertilizer Plants — Ship Yards.

PRODUCTS — Belt Conveyors — Screw Conveyors — Bucket and Screw Elevators — V-Belt Drives — Pulleys — Bearings — Sprockets — Chain — Gears — Buckets — Clutches — Reducers — Hoists — Apron, Vane and Reciprocating Feeders.



The efficiency and low maintenance cost of Continental idlers has fully justified the many REPEAT orders from satisfied operators.



Mine Fan V-Belt Drive from Electric Motor with Auxiliary Drive from Diesel Motor for emergency. Designed and manufactured by Continental.



Southern Textile Mill solves Bale Handling Problem with compact Continental Escalator.



Efficient low cost haulage of 200-TPH Crushed Stone 1 1/4 miles from quarry to mill via Continental Belt Conveyors.

Continental is equipped to handle any mechanical power transmission or materials handling problem. Send your inquiries to our nearest sales office.

INDUSTRIAL DIVISION
CONTINENTAL GIN COMPANY

BIRMINGHAM, ALABAMA



ATLANTA

DALLAS

MEMPHIS



FERTILIZER AND RESEARCH

PROBABLY the most important criterion of advancing technology in the fertilizer industry has been the steadily increasing plant food content of mixed fertilizers, from an average of 13.9 per cent in 1920 to 21.3 per cent in 1944, and the fact that the physical condition of mixed fertilizers has improved at the same time.

Side by side with improvements in technology have come improvements in the use of fertilizers.

Most significant is the increase in total tonnage of plant food used on American farms which now stands at about 270 per cent of what was being applied 3 decades ago. This increase reflects the integrated effect of literally thousands of field and laboratory experiments that have been conducted throughout the nation. Not only has the total tonnage increased, but fertilizer use has expanded substantially in regions which used little or none a few decades ago.

Many other changes in usage have occurred, among which may be mentioned the increased use of fertilizers on grassland, the marked improvement in methods of distribution, and the practical use of minor nutrient elements, all reflecting the results of research.

Now, assuming that we are convinced that past research has greatly benefited both agriculture and the fertilizer industry, let us shift our sights to the future and pose two questions: (1) What stake if any has the fertilizer industry in a continuing aggressive program of agricultural research in its broader outlines? (2) Do important problems still exist in fertilizer use and technology that research might solve with benefit to the fertilizer industry?

In my opinion, the answer to the first question is found in the fact that most agricultural research not aimed directly at fertilizer use of technology, creates as a by-product increased opportunities for the profitable use of plant food. For example, whenever through research we are able to increase the potential yield of a crop by removing some limiting factor, whether it be cli-

by

Robert M. Salter

*Chief, Bureau of Plant Industry,
Soils and Agricultural Engineering,
Agricultural Research Administration*

mate, disease, insects, water, weeds or what not, we increase the plant food requirements of the crop and generally raise the level of profitable fertilizer use.

Hybrid corn has not only added 750 million bushels annually to the Nation's corn crop. It has also increased the total plant food required to grow the corn crop by an amount equivalent to 5 million tons of 12-4-8 fertilizer. Much of this increased requirement will be met by means other than commercial fertilizer, but the eventual effect can scarcely be other than a significant increase in demand for commercial plant food.

Even research that aims at increased efficiency in livestock production may create greater outlets for fertilizer. The control of animal parasites and diseases, the development of higher producing strains, the breeding of heat-tolerant cattle for the South, all tend to stimulate livestock production. More livestock require more feed, and more feed requires more plant food.

Research aimed at finding new uses for crops, such as cotton, peanuts, and soybeans, stimulates their production and is reflected in greater demands for plant food. The same is true for research on new crops. For example, research is rapidly placing the American tung industry on a sound economic footing and tung trees respond profitably to liberal fertilization.

In fact, all of this research tends to place the farmer in sounder economic position, and as the farmer profits, so does the fertilizer industry.

Now we come to our second question, which is really two questions: Can research find additional profitable uses for fertilizers and what can research do to still further improve the quality of fertilizers or lower plant food costs?

First, I would suggest that we need to re-examine the question of optimum rates of application under conditions where we combine the most advanced methods of producing our crops. In other words, we need to find out how much fertilizer we can profitably use where we grow the latest improved varieties, follow the best known methods of seed bed preparation, planting, and cultivation, use effective measures to control insects and diseases, harvest at the optimum stage and by methods that to control insects and diseases, harvest at the optimum stage and by methods that minimize loss. My guess is that such studies will show that rates presently recommended are considerably below the optimum for such conditions.

This point is well illustrated by experiments now underway in cooperation with the North Carolina Experiment Station. The average yield of corn in North Carolina is about 22 bushels, reflecting the fact that the average corn field in that State is planted to open pollinated corn, thinly spaced, indifferently cultivated and niggardly fertilized. Year before last, in eleven distributed experiments, by combining the use of the adapted hybrid variety, close planting, thorough but shallow cultivation and liberal fertilization an average yield of 72 bushels per acre was produced and yields up to 107 bushels in individual tests. Of special significance is the fact that excellent returns were realized on a fertilizer application of 200 to 300 pounds of 6-8-6 at planting followed by a side dressing of nitrogen fertilizer carrying 100 pounds of N per acre.

In addition to finding new uses, another research task, no less essential to the health of the fertilizer industry, is to keep fertilizer recommendations in the older fertilizer using areas geared to changing needs as these shift through the cumulative effects of established fertilizer practices. The idea is untenable that because a certain application of a particular ratio is initially most profitable, it will continue so indefinitely. In cooperation with sev-

(Continued on page 220)

AS TEXAN



AS A MUSTANG AND JUST AS FAMOUS

In 1885 a young druggist with a genius for beverage chemistry created a new soft drink in Waco, Texas, and introduced it to his customers. A unique beverage, because of its mellow tart original flavor, it immediately became popular and its fans promptly named it "Dr. Pepper."

Travellers coming into Waco liked the new drink, too, and they spread the word, and soon there were bottling plants throughout the State. Today the drink that originated in a small town drug store 61 years ago is a favorite not only in Texas, but throughout the nation and in foreign countries as well. Wherever it is introduced, it finds a hearty welcome.

There are now more than 400 Dr. Pepper Bottlers in the United States. And still more are opening in foreign countries. The sixty-eight Dr. Pepper Bottlers in Texas are proud to be a part of this typically Texas Institution, born in Texas, reared in Texas ... and known the world over by its famous slogan as a "liquid bite to eat at 10, 2 and 4 o'clock, or when you're hungry, thirsty or tired!"



DR. PEPPER BOTTLING COMPANIES IN TEXAS

Ablene • Alpine • Amarillo • Austin • Beaumont • Bellville • Big Spring • Brenham • Brownwood • Brownsville • Bryan • Center • Childress
 Cores • Corpus Christi • Corsicana • Dalhart • Dallas • Denison • Dublin • Eagle Lake • Edna • El Paso • Ft. Worth • Franklin • Galveston
 Gonzales • Greenville • Henderson • Houston • Kingsville • Laredo • Liberty • Livingston • Lubbock • Marshall • Mason • Mineola • Mt.
 Pleasant • Nacogdoches • Olney • Orange • Palestine • Pampa • Paris • Pecos • Port Arthur • Ranger • Rosenberg • San Angelo • San
 Antonio • Sinton • Smithville • Taylor • Temple • Texarkana • Trinity • Tulla • Tyler • Uvalde • Vernon • Victoria • Waco • Wharton
 Wichita Falls • Woodville • Yoakum • Yorktown

JULY NINETEEN FORTY-SIX

Panagra Buys Martin Planes



Panagra (Pan American-Grace Airways) recently announced the purchase of seven twin-engined Martin 303-type 38-passenger airplanes. Delivery of these is expected in 1947. The planes have been purchased from the Glenn L. Martin Company of Baltimore at a total cost of \$1,589,000.

These 300 mile an hour planes will carry 38 passengers in their comfortably pressurized cabins and will serve to speed air transport between the eight Latin American nations on the Panagra route. They will, also, reduce elapsed time and increase flight frequencies and are part of Panagra's post-war plans to give the west coast of South America the best in fast, comfortable air transport. The airline is now awaiting delivery of four-motored Douglas DC-4s and DC-6s to use on its recently approved Great Circle Route from Balboa in the Panama Canal Zone to Buenos Aires, Argentina. The Martins 303s will be used on the shorter routes such as Santiago to Buenos Aires; Lima to La Paz; Lima to Santiago, La Paz to Buenos Aires.

In addition to greater speeds and bigger capacity loads than the present two-engine planes, the Martins will be equipped with the latest in modern travel conveniences. Eight rows of reclining double seats on either side of the aisle, so arranged

as to give each passenger a full view from the plane's large cabin windows, make up the main section of the interior of the plane. A semi-circular lounge in the rear of the cabin with two large windows on either side will accommodate six passengers and offer an excellent panorama view. And a drop leaf table and other facilities in the lounge are provided for recreation or work.

To eliminate any climatic discomfort to the passengers in the varying altitudes and latitudes which the planes will fly, each Martin 303 is equipped with thermostatically controlled warm-wall radiant cabin heating, air conditioning and humidity control. Other innovations are indirect lighting, and individual reading lamps above each chair. In addition, there are individually controlled ventilators for additional cooling air, and a hostess "call light" for each double seat.

Front and rear doors will facilitate and speed-up boarding and deplaning of passengers. Another convenience is the baggage compartment to the right of the rear door giving the passenger the option of handling his own baggage when entering or leaving the plane.

Moreover, the new planes will have an ample buffet in the fore section of the cabin equipped with

the most up-to-date facilities for feeding all the passengers in a minimum of time. Two pilots and two stewardesses will make up the crew.

Powered by two 18 cylinder Pratt and Whitney engines of 2400 horsepower each, the Martin 303s can maintain a cruising altitude of 16,000 feet. They are provided with thermal de-icing systems with exhaust heat piped to wing and tail surfaces, and are equipped with Hamilton standard reversible pitch propellers to give the plane absolute braking power. They will also utilize jet action of the exhaust to gain additional speed.

To provide additional fuel facilities which will increase the range of the plane on the longer Panagra hops, the Martins' total take-off weight has been increased to 37,500 pounds. They have a tricycle-type landing gear with dual wheels in each main gear and steerable nose wheel, a wing span of 89 feet 4 inches and an over all length of 71 feet 4 inches.

T. C. I. Establishes Office for Florida and Georgia

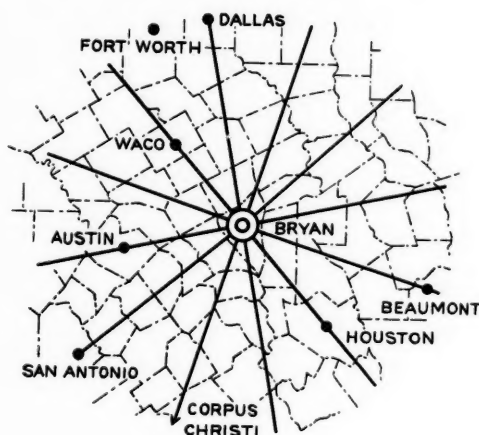
Establishment in Jacksonville of a district sales office of the Tennessee Coal, Iron and Railroad Company, of Birmingham, Ala., to serve Florida and South Georgia was announced by R. J. Stakelum, the company's general manager of sales.

Robert P. McGregor, a member of the company's sales organization since 1937, has been appointed manager of the Jacksonville office, which opened recently in rooms 203-204 at 409 West Adams Street.

Mr. McGregor, born July 2, 1908, in Brandon, Miss., spent most of his life in Birmingham, where the iron ore and coal mines, furnaces and plants of T. C. I. are located.

The Jacksonville district office will be responsible for T. C. I.'s sales activities in that portion of Florida extending eastward from Tallahassee and the portion of Georgia lying south of a line reaching from Columbus to Savannah. The office also will handle sales affairs of two other subsidiaries of U. S. Steel in this territory, American Steel and Wire Company and Carnegie-Illinois Steel Corporation.

BRYAN TEXAS.



THE HUB CITY *of the* GREAT SOUTHWEST

BRYAN OFFERS INDUSTRY:

low tax rates,
 welcome and support,
 exceptionally good water,
 excellent banking facilities,
 sufficient natural gas for all demands,
 easy access to many valuable raw materials,
 proximity to the center of finance and population of Texas,
 the resources of research laboratories of famous Texas A & M College,
 direct line to one of nation's major ports, gateway to Latin America,
 mild and pleasant climate where the best of living conditions prevail.

Bryan, the home of Texas A & M College, is in the center of population and finance of the great Southwestern State of Texas. The vast resources of the world famous research laboratories and experimental stations of Texas A & M have assisted and are continuing to assist industry rising in this rapidly growing industrial community.

Two nationally famous concerns have branches in Bryan: Cotton Poisons, Inc., a subsidiary of the Pennsylvania Salt Company; and the International Furniture Company of Chicago, rated as the second largest company in its line in the United States.

The Ranger Corporation has just completed one of the largest grain elevators in this part of the Southwest and will start operation immediately. In addition there are many other lines of manufacturing such as: cement block making, cotton processing, ice cream and milk producing, bottling, wood working, etc.

For detailed information contact the Industrial Committee

**BRYAN — COLLEGE STATION
CHAMBER *of* COMMERCE**

BRYAN — TEXAS

TEXAS SULPHUR

ENTERS INTO NEARLY EVERY MILITARY
AND CIVILIAN REQUIREMENT
OF THE NATION

THE STATE OF TEXAS SUPPLIES THE GREATER PORTION OF THE NATION'S NEEDS OF SULPHUR (BRIMSTONE). Either in the form of liquid acid or solid mineral, sulphur is vital to the life of such industries as—explosives, fertilizer, rubber, paint, varnish, pulp and paper, dyes, chemicals, insecticides, textiles, food processing.

DUVAL TEXAS SULPHUR COMPANY

Main Office: 1120 Esperson Building, Houston, Texas

Plant: Orchard, Texas

Farming IS OUR BUSINESS, TOO

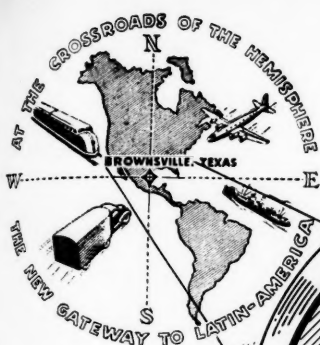
Yes, tree farming. For many years Angelina has carried on the policy of selective cutting to insure a perpetual supply of highest quality Southern Yellow Pine.

Our carefully protected and cultivated forests are pledged to the building of tomorrow's finest homes in keeping with our mutual purpose of making the finest things for America.

Remember always it is the forest behind the mill that counts most.

Angelina County Lumber Company KELTYS, TEXAS

Since 1887



LOOK!

This is INTERNATIONAL BROWNSVILLE

INTERNATIONAL SEAPORT—The Port of Brownsville provides a sea corridor to international and domestic markets for the wealth of agricultural and other products of the Lower Rio Grande Valley of Texas and Northern Mexico. Situated 17 miles inland from the Gulf of Mexico it is reached by a 30 foot deep unobstructed ship channel, authorized to be deepened to 32 feet. The Gulf Inland Waterway, now under construction, will terminate at Brownsville and provide sheltered water transportation to and from the great Mississippi Valley Region. It is the quickest and cheapest route to and from Northern Mexico. Truly a Marine Highway to World Markets!

INTERNATIONAL AIRPORT—The Rio Grande Valley International Airport at Brownsville, fifth largest in the United States, is the interchange point between planes from Mexico and Latin America with major airlines from New York, Chicago, Denver, New Orleans, and Texas cities. One of the important international airports of the country, it has air express, air freight, charter service, and major overhaul in operation.

INTERNATIONAL RAILROADS—Two major United States railroad lines terminate at Brownsville, exchanging through freight with Mexican railroads at the Rio Grande River where Brownsville and the Mexican city of Matamoros are connected by bridges. Much of Mexico's raw materials and handicrafts, and the United States' manufactured products clear through this gateway.

INTERNATIONAL HIGHWAY—U. S. Highway 77 from Winnipeg, Canada, due north-south to Brownsville, or from the heavily populated eastern United States over the national highway system through Brownsville to Mexico City, provides the shortest, most economical highway route for commercial and tourist traffic between Mexico and the United States. Final segment of this highway in Mexico, to be completed in a few months, intersects the Pan-American Highway at Victoria, Tamaulipas, Mexico, a sea level route, and is already rerouting highway traffic between the two countries—through Brownsville.

INTERNATIONAL TRADE—Consider Brownsville for your assembly plant to supply Mexico and Central America, or for your warehouse to distribute to our neighbors to the South, or for the prefabrication or concentration of raw materials from Mexico and Central America; for, Brownsville is "AT THE CROSSROADS OF THE HEMISPHERE" and is "THE NEW GATEWAY TO LATIN AMERICA" by sea, air, railway, and highway.

INVESTIGATE—For further details address the

BROWNSVILLE CHAMBER OF COMMERCE

P. O. Drawer 752,
Brownsville, Texas.

Airview of Brownsville showing the highway bridge into Mexico

Airview showing facilities at the Port of Brownsville

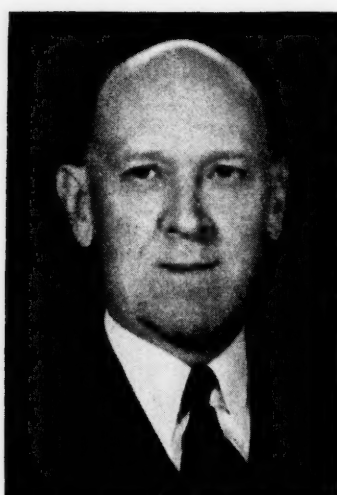
Airview of the Rio Grande International Airport at Brownsville

Airview of Brownsville looking South toward the Rio Grande River and Mexico





R. J. Meybin



H. A. Davies

R. J. Meybin Retires as Head of Virginia Bridge Company, is Succeeded by H. A. Davies

Robert J. Meybin, vice president and general manager of the Virginia Bridge Co., southern fabricating subsidiary of the United States Steel Corp., retired July 1 after forty years' continuous association with the present company and its predecessor, the Virginia Bridge & Iron Co. Mr. Meybin is being succeeded by Herbert A. Davies, manager of the company's Birmingham plant.

Mr. Davies has been associated with the present company and its predecessor, the Virginia Bridge & Iron Company, for many years and brings to his new position a background of more than 30 years' practical experience in the steel fabricating industry. First entering the employ of the Virginia Bridge & Iron Co. in 1903, he served as office boy, blue printer, tracer and detailer until going to Virginia Polytechnic Institute as a student in Civil Engineering.

Completing his schooling Mr. Davies returned to the company in 1909 for a short period before going with Post & McCord, of New York, as structural draftsman. He re-entered the employ of the Virginia Bridge & Iron Company in 1910 and has remained with the company con-

tinuously to the present time, during which he has held various positions in the Engineering, Contracting and Operating Departments. From October, 1923, to February, 1936, he was manager of the company's plant in Memphis, and from 1926 until the date of his promotion to vice president and general manager, was manager of the Birmingham plant.

Mr. Meybin started with the Virginia Bridge & Iron Co. in 1906 as manager of its Burlington, N. C. plant, which was later closed. He then went to Memphis to supervise construction of the company's facilities in that city, and served as manager of the plant until 1918 when he was elected vice president and general manager of the old company. In February, 1936, when the company became a subsidiary of the United States Steel Corp., he was elected vice president and general manager of the new Virginia Bridge Co.

His ambition to provide the South with an unexcelled steel fabricating service, and a continuing policy of accepting every type and size of structural steel job offered, has been importantly responsible for the position his company now holds as the largest structural steel fabricator in the South and third largest

in the United States, with a national reputation for versatility.

Under his direction the engineering, fabricating and erecting resources of the company were developed to handle such major construction projects as the Newport News-James River Bridge, the Cochran bridge across Mobile Bay, San Francisco Bay bridge at San Mateo, Coos Bay bridge and Yaquina Bay bridge on the Oregon Coastal Highway, as well as a large percentage of the industrial plants and power developments built throughout the South and Southwest.

During the two world wars the company devoted its entire resources to production of structural steel for all types of plants for the production of war materials, as well as for ships and special equipment, including the famous Bailey bridge used so successfully on all battle fronts, and was the first structural steel fabricator to win the Army-Navy E-Award for excellence of performance.

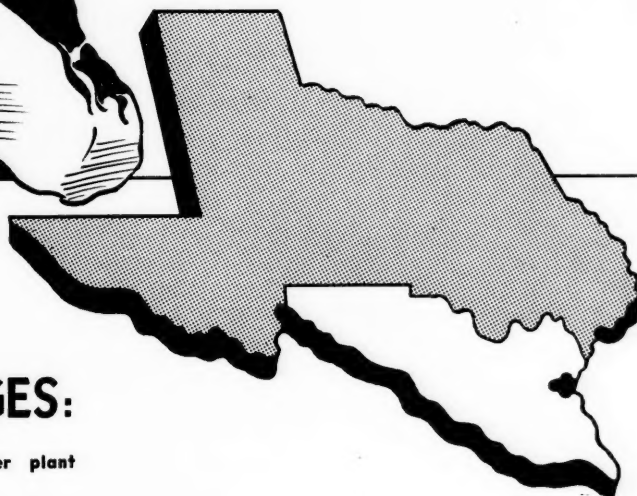
Born November 17, 1880 at East Brady, Pa., Mr. Meybin received his schooling in that state, and in 1900 entered the employ of the Keystone Bridge Works branch of the Carnegie Steel Co. In 1904 he was transferred to the Edge Moor plant of the American Bridge Co., and in 1906 cast his lot with the young but promising Virginia Bridge & Iron Co.

New Shipping Service to Gulf of Mexico

Steamship service between North Atlantic ports and the Gulf Coast from New Orleans to Tampa has been announced by Captain Granville Conway, War Shipping Administrator. The additional service will be operated by the Pan-Atlantic Steamship Co. as agent for the shipping administration.

Weekly sailings will be provided from Boston, New York, and Philadelphia to New Orleans, Mobile, Panama City, and Tampa returning Northbound weekly to the same North Atlantic ports. Initial Southbound sailing is scheduled from Boston—July 12; from New York—July 16; from Philadelphia—July 18. Northbound initial sailing will be from New Orleans—July 26; from Mobile—July 29; from Panama City—July 30; from Tampa—July 31.

SOUTH TEXAS OFFERS *a Challenge* TO AMERICAN INDUSTRY



ADVANTAGES:

Semi-tropical climate to lower plant construction costs.

An adequate supply of good water for industrial use.

Abundant supply of low cost fuel.

Three deep-water ports, with companion rail, air and motor freight services; an inland canal traverses the field.

A rapidly increasing population with a high average income, thereby insuring good markets.

Necessary business and industrial services; ample financial services.

Desirable plant sites, in wide open spaces, fairly priced.

A reasonable taxing policy; no State income tax.

A plentiful supply of skilled and unskilled labor, peaceful in temperament.

An ample supply of low cost, dependable and efficient electric power.

THE undeveloped natural resources of the South Texas Empire present a challenge to the industrial minds of America. Here, in a closely-knit territory of some 42,500 square miles, is to be found a multiplicity of basic raw materials unmatched by any single region of this country. The diversity is so great, the quantities so abundant, that description cannot be undertaken here. All we ask is that YOU make an investigation.

Our Industrial Department will be glad to work with any manufacturer interested in utilizing South Texas resources. All inquiries will be held in strict confidence.

★ **CENTRAL POWER AND LIGHT COMPANY**

GENERAL OFFICES: CORPUS CHRISTI

Serving **TEXAS INDUSTRY** *Since 1881*

Temple's modern mills at Diboll and Pineland, Texas, bring you Southern yellow pine and hardwoods that are noted for quality. Equipped with the latest and most modern lumber manufacturing machinery, these mills are working night and day to answer the call for lumber in our country's great post-war building program.

• • •

SOUTHERN PINE LUMBER COMPANY
TEXARKANA, TEXAS

FOR 74 YEARS

WALTER TIPS

and *The Walter Tips Company* have assisted in the growth of Central, South and West Texas.

Today, the firm is in better position than ever to participate and help in the further growth of Texas.

WHOLESALE DISTRIBUTORS OF
SHELF AND HEAVY HARDWARE, MILL SUPPLIES
AND MACHINERY, ELECTRICAL APPARATUS AND
SUPPLIES, SPORTING GOODS, GUNS AND AMMU-
NITION AND AUTO ACCESSORIES, RADIO AND
MARINE SUPPLIES

THE WALTER TIPS COMPANY
AUSTIN, TEXAS

NATURES BUILDING MATERIAL

Build for Permanence and Beauty
with

Cordova Cream or Cordova Shell Limestone

Residence — Office Building — School
Hospital — Church



Our Material is Appropriate
for Any Building



TEXAS QUARRIES, INC.

P. O. Box 91, Austin 1, Texas

GEOGRAPHY

..... Has a lot to do with it



*One of the fastest growing little Cities in the Nation located
in the heart of the Nation's most rapidly developing industrial area.*

GRAND PRAIRIE OFFERS:

An abundance of natural gas, electricity and artesian water at economical rates. Ample supply of skilled labor, trained locally during wartime. Economical industrial and home sites. Markets: More than one million people within a radius of 30 miles. Adequate transportation facilities by rail, air, and highway.

LOCATION:

Grand Prairie is a City of 18,000 population, located 11 miles from Dallas and 19 miles from Fort Worth. A city with 30 manufacturing firms; surrounded by grain, truck, and livestock farmers, dairymen, and fruit growers.

The Center of the Dallas-Fort Worth Area

Chamber of Commerce

P. O. BOX 1227

GRAND PRAIRIE, TEXAS

News from Industry

Hercules Officials Shifted

Clifford T. Butler has been appointed superintendent of the Hercules, Calif. plant of Hercules Powder Co., of Wilmington, Del., to succeed Leroy P. Hall who has resigned.

Mr. Butler was superintendent of the Hercules plant at Bessemer, Ala., before transfer to California. His place at Bessemer will be taken by Enstace St. P. Bellinger, who was assistant superintendent at the Hercules, Calif. plant before entering active military service in 1942. Mr. Bellinger has been manager of the Hercules-operated Allegheny Ballistics Laboratory, Cumberland, Md., since returning to inactive duty in February, 1946. Mr. Butler transferred to the Bessemer plant in February of this year also, after spending five years at the Hercules-operated Radford Ordnance Works, Radford, Va., as smokeless powder superintendent, operating manager and plant manager.

Armco Promotes Three

The American Rolling Mill Co. recently announced the advancement of three members of its Ashland, Ky. Division. K. C. McCutcheon, formerly General Superintendent of the Ashland plant, has been appointed as assistant to the vice president in charge of operations; J. M. Lobaugh has been named as general superintendent of the Ashland Division; and George Yost, Jr., assistant to manager of that division. Mr. McCutcheon's new responsibilities will include special assignments in connection with raw materials and the development of blast furnace ores. Since the Ashland Division is one of the Company's largest users of ore and other raw materials, he will retain his office and home in Ashland. In his new capacity as assistant to manager of the Ashland Division, Mr. Yost will be in charge of that plant's personal relations functions.

Surplus Act Scored

"The Surplus Property Act of 1944 is proving to be an ineffectual and time-consuming means for disposing of surplus personal property of the Government in getting it into the hands of consumers," says a resolution adopted by the Board of Directors of Associated Equipment Distributors, at their semi-annual meeting in the Edgewater Beach Hotel, Chicago, June 17, 18 and 19th. February 13, 14, 15 and 16, 1947, was set as the time of A.E.D.'s next Annual Meeting, to be held at the Edgewater Beach Hotel, Chicago. Reports were made by eleven standing and special committees.

Members of the A.E.D. Board of Directors attending the semi-annual meeting, were: F. B. McBath, President, Columbia Equipment Co., Portland, Oregon; W. A. Danner, Exec. Vice-President, Parker-Danner Co., Hyde Park, Mass.; A. F. Garlinghouse, Vice-President, Garlinghouse Bros., Los Angeles, Calif.; C. F. Halladay, Vice-President, Western Material Co., Sioux Falls, S. D.; W. J. Kane, Vice-President, Kane-Gibb-Marr, Winnipeg, Manitoba, Canada; W. W. Bucher, Treasurer, R. E. Brooks Co., New York, N. Y., and C. F. Winchester, Exec. Secretary, Washington, D. C.

Also: H. J. Hush, Griffin Equipment Co., New York, N. Y.; G. N. Crawford, G. N. Crawford Equipment Co., Pittsburgh, Pa.; R. H. Carter, Virginia Tractor Co., Richmond, Va.; A. E. Hahnman, Tractor and Machinery Co., Inc., Atlanta, Ga.; J. C. Williams, W. W. Williams Co., Columbus, Ohio; G. W. Swart, Contractors Machinery Co., Grand Rapids, Mich.; J. W. Pell, James W. Bell Co., Cedar Rapids, Iowa; H. L. Burleson, Browning-Ferris Machinery Co., Dallas, Texas; F. G. Connelly, Connelly Machinery Co., Billings, Mont.; W. G. Clark, Tri-State Equipment Co., Inc., Memphis, Tenn.; and W. A. Norris, Wortham Machinery Co., Cheyenne, Wyo. Besides Chairman Phillips, members of A.E.D.'s Committee on Disposal of Government Surplus participating in the meeting were: W. A. Danner, Parker-Danner Company, Hyde Park, Mass.; M. E. Jost, Equipment Corp. of America, Philadelphia, Pa.; V. E. Rabel, Star Machinery Co., Seattle, Wash., and H. O. Stamp, Boelch Equipment Co., Milwaukee, Wis.

Special Mixer Bulletin

Sprout, Waldron & Co., Muncy, Pa., engineers and manufacturers of flour, feed and cereal milling equipment, have just issued an attractive new "Special Mixer" bulletin which illustrates and describes many applications where Sprout-Waldron individually designed mixers have answered the particular mixing problem. This new bulletin is now available for distribution and can be had upon request. Ask for "Special Mixer" Bulletin SM-346.

Ryerson Elects

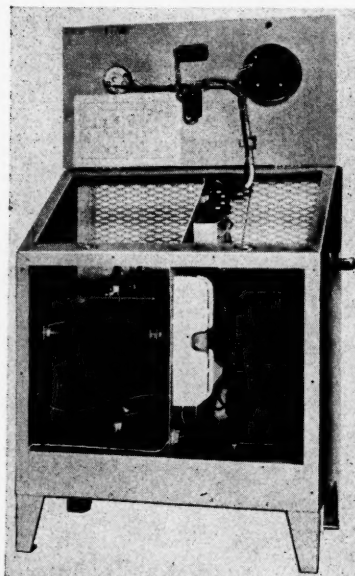
Ernest L. Hartig, vice president and treasurer of Joseph T. Ryerson & Son, Inc., has retired after 45 years of service. Beginning in the bookkeeping department, Mr. Hartig was successively cashier, secretary and assistant treasurer (1917), vice president and secretary (1920), and finally vice president and treasurer, which position he has held since 1933. Merle A. Miller has been elected treasurer. He has been with the Ryerson company for 24 years, and is well known in credit circles—he was formerly assistant treasurer and manager of the credit department. A new office of controller was created and Frank H. Ziebell, Jr., was elected controller. He was formerly assistant secretary and has been associated with the company for 29 years. Thomas G. Miller was elected assistant secretary, and George W. Geiger was elected assistant controller.

N & W Benefit Fund

Benefits totaling \$205,508.13 were paid to members of the Norfolk and Western Relief Fund during the first quarter of 1946, according to the railway's quarterly relief fund report. Receipts of the fund during the three months ending March 31 were \$187,902.63. At the end of the quarter the fund had a balance of \$5,009,950.74, compared with \$4,906,227.72 on March 31, 1945, a gain of \$103,723.02 for the twelve-month period. Since its establishment in July, 1917, members and their families have been paid a total of \$16,583,685.17 in sickness, accident and death benefits. For establishment and operation of the fund, the entire expense of which is borne by the railway, the Norfolk and Western has spent \$3,659,405.92.

Battery Charger Described

On-the-spot charging of batteries with Automatic's selenium battery charger, is described in a new brochure being distributed by Automatic Transportation Company, 149 West 87th Street, Chicago 20, manufacturers of electric propelled material handling equipment. The selenium charger is designed exclusively to charge batteries for the Transporter, Automatic's motorized hand truck. Completely



automatic, the unit enables untrained personnel to charge batteries from electric outlets by simply connecting the battery to the charger and setting the time clock. The clock regulates length of charge and automatically terminates the charge. It is claimed that battery temperature well below the maximum permitted by manufacturers is maintained throughout the charging period, prolonging battery life and that the charger is approved by both underwriters' laboratories and battery manufacturers. The chargers are available for operation from three standard AC lines—110-115 volt 60 cycle phase, 220-230 volt 60 cycle single phase, and 110-115 volt 25 cycle single phase.

Synthetic Rubber Plants Called Essential

William P. Witherow, president of Blaw-Knox Co., which prepared the standard copolymer plant designs for a major part of the nation's synthetic rubber plant program, said recently he heartily favors a plan to preserve the country's basic synthetic rubber plants to insure a "safe" national rubber program along lines proposed this week by the Inter-Agency Policy Committee on Rubber.

"A safe rubber program," Mr. Witherow explained, "is one guaranteeing this nation ample production to meet its needs in the event the source of natural rubber again is severed. Safe means 'enough' in time of war against shortages, and in time of peace, it means protection against unduly high prices that might be imposed by political international cartels."

"The rubber companies are doing a magnificent job in improving synthetic rubber. The work of furthering the usefulness and service of this amazing product should be left in their hands with their judgment a determining factor in the decision as to needed plant capacities," Mr. Witherow said.

Harvester Has New Plant

International Harvester Co. has taken formal title to and possession of its new Louisville Works on Crittenden Drive, Ralph C. Archer, vice president in charge of the company's farm tractor division, has announced. Top management of the Louisville Works, consisting of J. E. Harris, works manager; W. A. Salzmann, general superintendent; G. E. Reimers, assistant general superintendent; O. A. Goethals, work auditor; and R. C. Almgren, industrial relations manager, has already been selected, and there is a staff on the job at the site to carry forward intensive planning for the manufacture of the new Farmall Cub tractors and other tractor manufacturing operations. Engineering design for additions to the plant structure has been completed except for the foundry. It is expected that drawings for the new construction work, which will include a forge shop, warehouse, loading dock, and an addition to the manufacturing building, will be ready for release in about 90 days, when bids will be asked of general contractors.

Lathe Tool Announced

Dunn Engineering Company, 6341 Lyndon Avenue, Detroit 21, Mich., has announced the completion of engineering and development work in connection with its "Dynamatic" Lathe Attachment, and is now producing this machine in quantity to be available to the trade through established distributors of machine tools throughout the United States. The "Dynamatic" is designed for attachment to either the Atlas or Logan lathe, and its use with either one provides a new means of producing small parts automatically, at low cost. It is claimed by the manufacturer that a good many small parts, particularly those that require only form and cut-off operations, now being produced on the large and expensive automatics, can be produced just as rapidly, and with equal precision, on the "Dynamatic." This attachment employs the use of face cams to control the operation of rocker arms which, in turn, control the operation of form and/or cut-off tools attached to them. Either circular or flat form tools or a combination of both may be used, the selection of type depending upon size of the production run. The rocker arms operate on pivots instead of slides (which, of course, are flat surfaced) thus eliminating the necessity for constant adjustment. A means of adjustment is provided, however, when long usage might make simple adjustments necessary. Since all the pivot parts are precision ground and the property hardened, need for adjustment is seldom necessary. The stock is cam fed thru a tube by feed fingers, into a collet, automatically, and a moving stock stop determines the length of the part to be formed and/or cut off. Closing of the collet, which is also an automatic operation, is timed to coincide with the start of operation of the work tools. Power for operation of the "Dynamatic" is taken from the standard lathe lead screw and transmitted, by means of a roller chain and steel sprockets, thru a steel worm and bronze worm gear. Full information relating to the "Dynamatic," with additional details, will be supplied by the manufacturer.

(Continued on page 202)



Go Southwest,

young man to the last financial and industrial frontier in our country . . .

Roger Babson

AND THE PLACE TO LAND IS HONDO, MEDINA COUNTY, TEXAS

We have available labor supply for every type of industrial work—light or heavy.

We have a climate conducive to healthy and happy living with a year around average temperature of 69 degrees.

We are in an area producing vegetables, grain, wool, mohair, and beef.

Our transportation facilities are par excellence, being served by the main line of the Southern Pacific Railroad and by a federal thoroughfare, U. S. Highway No. 90. We have an expanding road development providing access to Hondo, the county seat, from any part of the county.

We are located on the threshold of Latin America expanding development making possible markets north and south of the Texas-Mexican boundary.

Near by Hondo Army Air Field, surplus to the needs of the United States Army, has facilities adaptable to industrial development in the form of housing and air transportation.

Our Chamber of Commerce and City Council are prepared and ready to give you every facility for investigating and in locating here.

WE WILL RUSH DETAILS TO YOU IF YOU WRITE OR TELEGRAPH

ALLEN R. WEBSTER,
Secretary — Manager

CHAMBER of COMMERCE

HONDO

TEXAS

CONTINENTAL'S POSTWAR FLEET'S IN

AMERICA'S NEWEST BUS



It's Air Conditioned

From Texas' Gulf Coast to Colorado's Rockies, these new Continental "TRAILMASTERS" are the sensation of the highways. Make your next trip via Continental Trailways and enjoy the finest in highway transportation

CONTINENTAL TRAILWAYS BUS SYSTEM



7 Trillion

Cubic feet of Gas available in 52 fields of the

LOWER RIO GRANDE VALLEY OF TEXAS

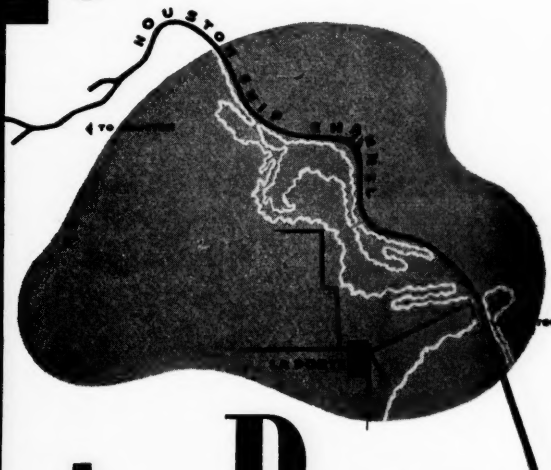
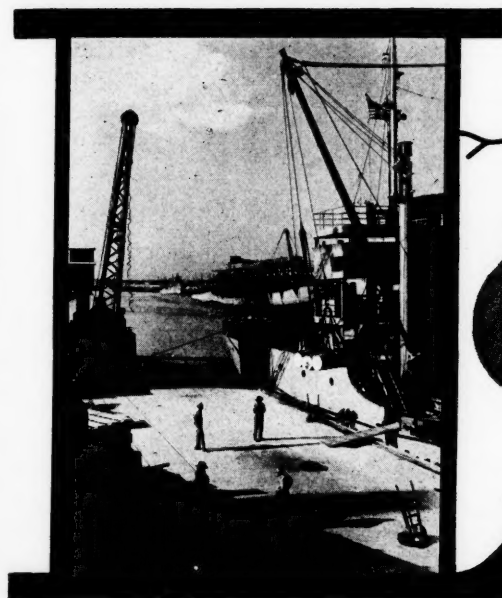
Greatest Reservoir of Unskilled Labor

No labor troubles in the warm, dry, sunshiny Texas Valley which has America's greatest supply of unskilled workers. Practically no winter fuel costs. Two deep sea ports. Two railroads; 700 miles of paved roads; average living costs.

BRANCHES OR NEW PLANTS INVITED

Industrial gas sells as low as 4 cents at McAllen, leading industrial city of the Texas Valley. Write Chamber of Commerce for full details.

Investigate..



A PORTE!

IF YOU ARE LOOKING FOR AN INDUSTRIAL SITE WITH ALL THE ADVANTAGES

Located at the entrance to the Houston Ship Channel, La Porte is twenty miles from the fastest growing major city in the United States . . . La Porte is in the heart of a great industrial development, certainly worthy of your investigation.

AND IF IT'S POWER: Extensive—limitless supply natural gas
Electricity in abundance
Plenty of water

OR TRANSPORTATION: Deep Water Port
18 Railroads
Air Cargo Express Service

OR LABOR: Skilled or ordinary
Pool of native born Americans
Excellent labor relations

AND: Extremely low taxes
Suburban community
Mild year-round climate

● Write for information Chamber of Commerce, Box 996, La Porte, Texas

News from Industry

Westinghouse Staff Changes

Gwilym A. Price, president of the Westinghouse Electric Corp., has announced the election of W. O. Lippman as a vice president of the Corporation. Mr. Lippman will be responsible for all plant labor relations including national negotiations, relationship with all certified bargaining units and administration under labor contracts. He will report to L. E. Osborne, a senior operating vice president. At the same time, Mr. Price announced that Vice President W. G. Marshall, in addition to his administration of company-wide industrial relations, has been assigned increased responsibilities for community and public relations. Included are the formulation and administration of policy related to press relationships, community affairs, formation of general industrial relations policies, administration of employee benefit plans and services, technical employment, and the Company's over-all health, safety and medical programs.

Weld Rod Information

"Jessop Stainless Steel Welding Electrodes," published by the Jessop Steel Co., Washington, Pa., contains complete information on the selection and application of Jessop stainless electrodes for welding stainless steel. Current range is furnished for each type of rod in varying diameters. Copies of this new 8-page booklet will be furnished by the company upon request.

Paper Rugs Foreseen

Paper fiber rugs with improved resistance to water, wear, skidding, mildew and fading are forecast by Monsanto Chemical Co., St. Louis, Mo. The improved properties are brought about through the coating of paper twine with a flexible plastic called vinyl butyral, Monsanto reports. The rug is then woven on standard mill equipment. The company suggests that the plastic-protected rugs will be relatively immune to stains from ink, gravy, food or other sources. It will be possible to clean them with a damp cloth. If and when application costs are reduced through mass production, Monsanto predicts, the paper rugs are likely to find increasingly wide use in patios, rathskellers, sun-porches, summer cottages and other locations where style and formality are not of paramount importance.

Fairless Gets High Honor

The War Department has presented the Medal for Merit to Benjamin F. Fairless, president of the U. S. Steel Corp. The citation accompanying the award, the highest civilian honor in the power of the President, follows: "Benjamin F. Fairless, for distinguished and exceptionally meritorious conduct in the performance of outstanding services to our country at war since June, 1942, in a position of great importance as a voluntary and uncompensated advisor to the Chief of Ordnance, Army Service Forces, on problems of management, production, and supply." As chief operating official of U. S. Steel during the war years, Mr. Fairless headed an organization that rose to a peak of more than 340,000 employees who contributed one of the nation's most outstanding volume production records—including more than 100 million tons of finished steel and a heretofore unsurpassed volume of ordnance weapons and fighting ships for the Allied fighting machine.

B & O Starts Through Service

A new daily through passenger train service connecting eastern points on the Baltimore and Ohio Railroad and over south-western roads to Oklahoma and Texas is being placed in service July 7, according to announcement by Roy B. White, B & O president. Through sleeping car and coach service will be inaugurated from Washington to Tulsa, Oklahoma City, Dallas, Austin and San Antonio in joint cooperation with the Frisco-Missouri-Kansas-Texas lines. West-bound to Oklahoma City the cars will leave Washington on the B & O's "Diplomat," connecting at St. Louis with the Frisco "Meteor" and the eastbound movement will be via the "Meteor," connecting with the B & O's "National Limited" at St. Louis for the East. The new through service to Dallas, Austin and San Antonio will be via the B & O's "Diplomat" from Washington and the Frisco-Katy "Texas Special" to the southwestern points; and to the East via the "Texas

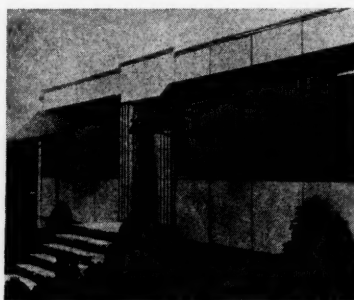
Special" and the "National Limited." By joint arrangement with the Missouri Pacific and Texas Pacific, through sleeping car service will operate from Washington to Houston, Fort Worth and Dallas via the "National Limited," connecting at St. Louis with the "Texan," and coach service to Houston will be operated over the same route.

Florida to Spend Big Sum

One million dollars is being spent over a two-year period by the Florida Advertising Commission, Vice-Chairman J. Saxton Lloyd said recently. The theme is a double-barreled message featuring Florida in the dual role of a vacation playground and a land of agricultural and industrial opportunity.

New Link-Belt Offices

Link-Belt Co., Chicago, manufacturers of materials handling and mechanical power transmission machinery, announce the opening of three new sales offices: A new office at Moline, Ill., is located at 1608 Fifth Ave., with M. J. Parykaza, district sales engineer, in charge. The telephone number of new office is Moline 1748. A new office at Cincinnati, Ohio, is located at 730 Temple Bar Bldg., Main & Court Sts., Cincinnati 2, with L. R. Clark, district sales engineer, in charge. The telephone number is Main 7662. A new office at Birmingham, Ala., is located at 823 Comer Building, 2100 Second Ave., N., Birmingham 3, with C. C. Wiley, district sales engineer, in charge. The telephone number is 4-6269.



New Aluminum Awnings.

Iron and Steel Exposition

The Iron and Steel Exposition, sponsored by the Association of Iron and Steel Engineers, will be held in the Cleveland Public Auditorium, Cleveland, Ohio, on October 1, 2, 3, and 4, 1946. The exposition, which is held in conjunction with the annual convention of the AISE, will feature exhibits of over 150 manufacturers supplying equipment and services to the nation's iron and steel, metal working, and allied industries. The arena and exhibit hall of the Cleveland Auditorium will be utilized for the housing of the exhibits. An attendance of over 12,000 engineering, operating, and supervisory personnel from the iron and steel, metal working, and allied industries is anticipated. Technical papers on various phases of plant operation and practice will feature the annual convention.

Electric Hand Trucks

Automatic Transportation Co., Chicago 20, manufacturers of the Transporter, this month announced new improved models of this electric-propelled hand truck. Featuring more than a score of major improvements, the new Transporter will have a potential service life double that of its predecessor, Automatic engineers predict, and the costs of maintenance will be cut in half. The engineers describe the new Transporter as "a more efficient unit with added ruggedness and more effective safety features plus a simplified design that makes for greater ease in inspection, maintenance and adjustment."

National Chemical Show, ACS Semi-Annual Meeting to Run Concurrently

The Fourth National Chemical Exposition will run concurrently with the semi-annual meeting of the American Chemical Society to be held in Chicago September 9 to 13. It is announced that the show, again sponsored by the Chicago Section of the ACS, will be held at the Chicago Coliseum from September 10 to 14.

The show committee, is making plans for record crowds which are expected to throng the Coliseum, located a short distance south of the loop. The exposition has been held every two years since its inception in 1940 and this will be the second of the series scheduled for the huge exhibition building which has been the scene of many national political conventions, automobile shows and other important events.

Marcus W. Hirsch, who managed the three preceding exhibitions and will direct the 1946 renewal, states that more than 80,000 square feet of floor space will be made available for displays. In addition to the main auditorium and the north hall, exhibits will overflow into the first and second floors of the Coliseum annex.

"A new floor plan will yield wider aisles throughout the exposition, assuring comfort for visitors and providing maximum attention for exhibits," said Manager Hirsch.

He announces that about 200 exhibitors have already applied for space, and the display will cover the entire field of chemical products and chemical processes.

"Many of the exhibits will reflect the results of the war, either in modifications resulting from changes in material resources or innovations brought about by war research and development work," said the show executive.

"Adequately represented at the show will be plastics, one of the fields in which expansion will be the greatest. There will be adequate displays of plasticisers, solvents, intermediates and other chemicals. The exhibits will also indicate the great advances that are being made in synthetic rubber, textiles and other products."

Dr. H. E. Robinson of Swift & Co., chairman of the 1946 show committee, has as his associates M. H. Arveson, Standard Oil Company (Indiana); S. M. Cantor, Corn Products Refining Co.; Lyle O. Hill, Riverdale Chemical Co.; Robert F. Marschner, Standard Oil Co. (Indiana); B. N. Rockwood, Swift & Co.; Edward H. Schaar, Schaar and Co.; A. E. Schneider, Armour & Co.; James K. Stewart, Sherwin-Williams Co.; Robert K. Summerbell, Northwestern University; Walter M. Urban, Swift & Co., and Lynn D. Wilson, Corn Products Refining Co.

Headquarters for the show are located in the administration building of the Coliseum at 1513 South Wabash Avenue, Chicago 5, Ill.

Hardwood Production Ahead

Contrary to implications and some popular belief that little or no hardwood lumber is being produced, reports from the hardwood mills of the South show that the current production of hardwood lumber is running well ahead of that of last year, according to Southern Hardwood Producers, Inc., Memphis, Tenn. This rising volume of output is being accomplished despite two major retardant factors, one of these being the continuous adverse weather conditions which have made logging operations extremely difficult. The other impediment to large volume output for many months has been the unfavorable price situation which extended through the first quarter, but which was partially relieved by ceiling price increases in early April.

Southern hardwood production in the first quarter of the current year reached a total of 828-million feet, board measure, compared with 822-million feet in the comparable period of last year. This brought the total production of hardwood lumber in all areas up to 1,634-million feet for this year's first period. This national total represents an increase of nearly 6% over the total output of 1,567-million feet a year ago.

That this trend is being maintained and accelerated is noted in the fact that Southern hardwood lumber production in April, 1946, exceeded by 28% that of April, last year. The total cut of Southern hardwoods during 1945 is estimated at 3,643-million feet, and present

(Continued on page 218)

NACOGDOCHES....

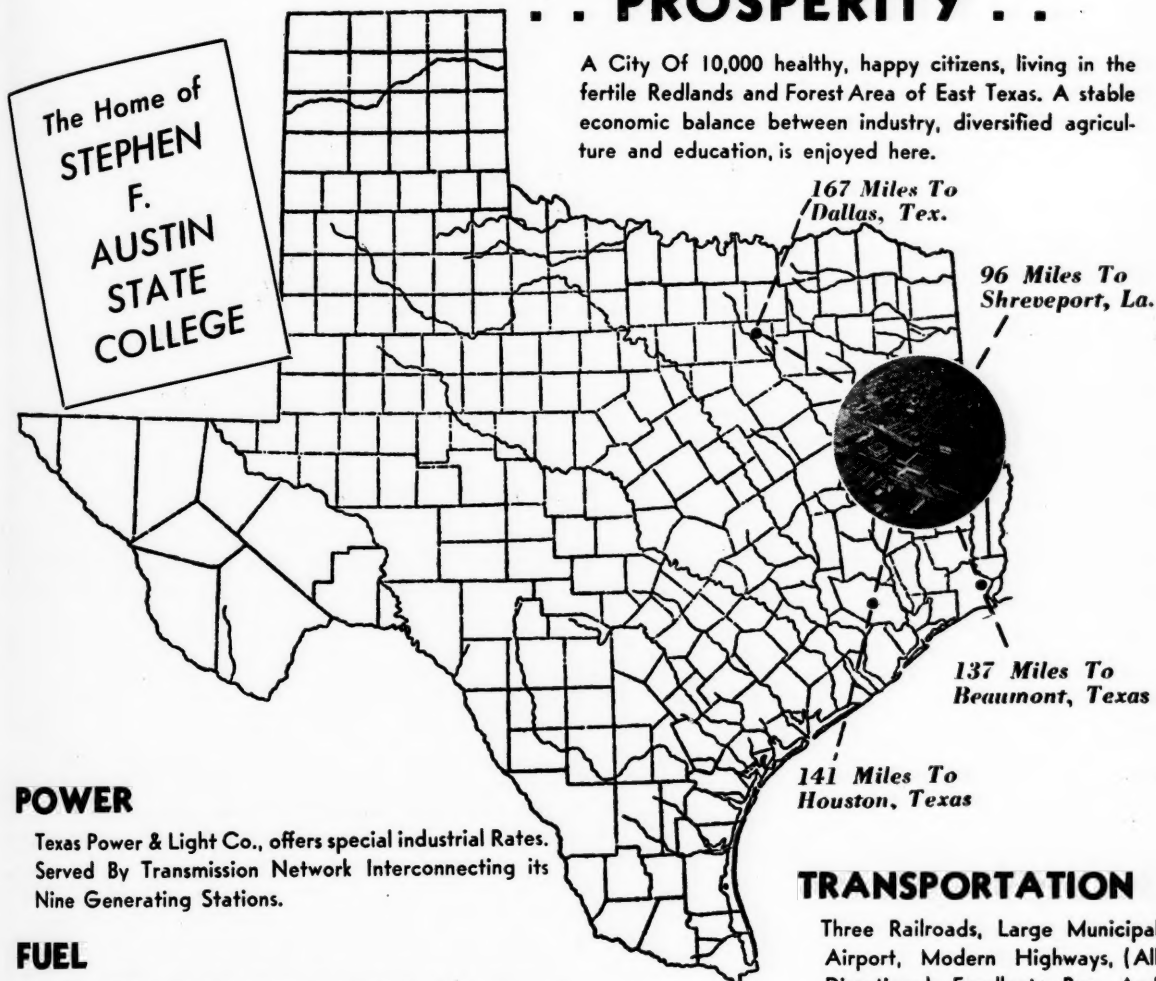
... "Heart of the Piney Woods"

The Industrial Empire of East Texas

Invites Industrialists to share in its

... PROSPERITY ...

A City Of 10,000 healthy, happy citizens, living in the fertile Redlands and Forest Area of East Texas. A stable economic balance between industry, diversified agriculture and education, is enjoyed here.



The Home of
**STEPHEN
F.
AUSTIN
STATE
COLLEGE**

167 Miles To
Dallas, Tex.

96 Miles To
Shreveport, La.

137 Miles To
Beaumont, Texas

141 Miles To
Houston, Texas

POWER

Texas Power & Light Co., offers special industrial Rates.
Served By Transmission Network Interconnecting its
Nine Generating Stations.

FUEL

Inexhaustible Supply through United Gas Corp.,
Advantageously Located Near East Texas Gas Fields.

CLIMATE

Mild Year-round. Ideal For Outside Operations.

LABOR

Excellent Supply. Both White and Colored, Native
Born, Skilled and Unskilled.

TRANSPORTATION

Three Railroads, Large Municipal
Airport, Modern Highways, (All
Directions). Excellent Bus And
Motor Freight Service.

LIVING CONDITIONS

Nacogdoches has fine Public Schools, Stephen F.
Austin State College, (A Standard Four-Year State
Supported College.) Fine Churches (all Denominations).
Modern Homes owned largely by their occupants. ...
A city rich in natural beauty.

Nacogdoches Chamber of Commerce

NACOGDOCHES, TEXAS

F. H. VAHLSING, Inc.

FRESH VEGETABLES

BONITA BRAND

*The Largest Shipper of Vegetables From The Lower Rio Grande Valley
Brings The Nation's Markets To The Valley's Door*

F. H. Vahlsing, prominent New York shipper and distributor, established this branch of his business in the Lower Rio Grande Valley in 1926; now he owns and operates thousands of acres of rich Valley land and has staggering payrolls for his vegetable and fruit packing plants during the season.

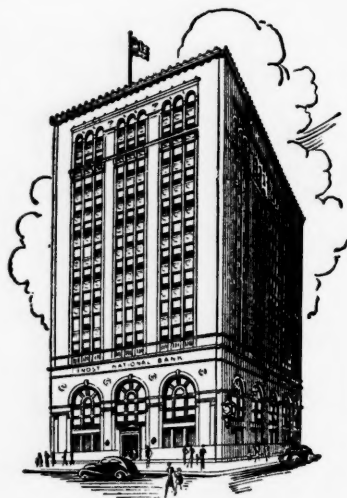
Each succeeding year Vahlsing, Inc., increases his investments in the Rio Grande Valley and there can be no greater proof of the future of the industry in this section than Vahlsing's constant progress.

ELSA,

Melvin A. Giese, Mgr.

TEXAS

We invite inquiries!



MEMBER FEDERAL DEPOSIT
INSURANCE CORPORATION

Southwest Texas, the land of sunshine, fertile soil, cattle, cotton, oil and a great variety of mineral deposits, offers marvelous opportunities for further development. Here labor conditions are normal, climate ideal, water, power and natural gas plentiful.

In the center of this great area is San Antonio, a thriving city of 400,000. It is the gateway to the wonderfully productive Rio Grande Valley and to Mexico.

Whatever may be your present or prospective field of activity, the resources and potentialities of Southwest Texas should appeal to you. This Bank, which has aided in its development and grown with this section of the State, will gladly answer your inquiries.

Total Resources over \$132,000,000

**FROST
NATIONAL BANK**

SAN ANTONIO, TEXAS

SAFETY • COURTESY • PROMPTNESS

ROSENBERG, TEXAS

HUB OF THE GULF COAST

FT. WORTH

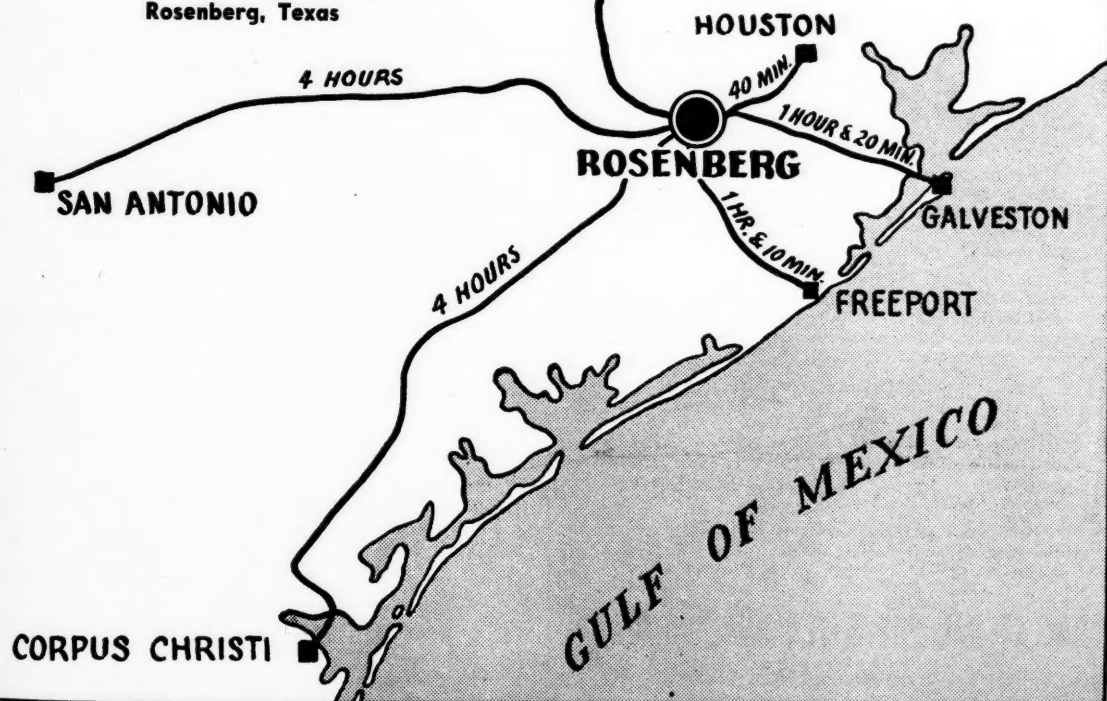
DALLAS

This advertisement sponsored by:
City of Rosenberg, Rosenberg
Lions Club and Rosenberg Cham-
ber of Commerce

For Full Information on Availability
of Industrial Sites, Factory Build-
ings or other details write:

ROSENBERG
CHAMBER OF COMMERCE
Rosenberg, Texas

- 35 Miles to Deep Water, Port with access to the 7 seas.
- 2 Transcontinental railroads — Southern Pacific and Santa Fe.
- 5 Major highways, with tremendous Texas market for your products. Highway map indicates distances based on 50-mile speed.
- 365-day working year, because of ideal climate.
- Trouble-free labor conditions.
- Unlimited power, Houston Power and Lighting Co., at same rate as Houston.
- Abundant water supply.
- Oil, natural gas and Sulphur—80% of world sulphur supply comes from 4 mines within a 50 mile radius of Rosenberg. 10 producing oil fields.
- Rich alluvial soil, producing high yields of fruits, nuts, vegetables, cotton, corn, rice, etc.
- 1,000,000 gallons of milk produced annually. Fine beef herds.
- Unexcelled opportunities for: chemical plant, garment factory, cotton mill, cheese and dairy products plant, and many other industries.



Wood Preservers' Convention Reported

WHILE Southern wood-preserving companies — whose 79 plants represent approximately one-half of the nation's productive capacity—are confronted with serious post-war production problems, development of new markets as accumulated railroad and utility maintenance backlogs are filled promises further expansion of the industry in the next few years.

This was the general trend of opinion at the forty-second annual meeting of the American Wood-Preservers' Association held recently in Cincinnati and attended by over 400 members representing all branches of the lumber, wood-using, and wood-processing industries.

As their operations are based on chemical treatment of sawn lumber, poles, piling and ties, wood-preservers are feeling the effects of the general lumber shortage. In cases where treating companies manufacture their own forest products, lack of woods and mill labor has in general curtailed production.

The industry faces a 20-million

gallon shortage of coal-tar creosote this year unless England allows creosote to be exported to the United States. This warning was issued by J. F. Linthicum, president of the American Lumber and Treating Co. His organization owns and operates plants at Fordyce and Crossett, Ark., Gainesville, Fla., and Shreveport, La.—in addition to four plants in other regions—and is now building production units at Florence, S. C., and Baltimore, Md.

"Users are operating on a hand-to-mouth basis and any interruption of shipments from distilleries because of strikes in the steel or coal industries, or for any other reason, causes immediate shutdown threatening the loss of large inventories of cross ties, poles, piling, and other forest products in storage for seasoning," he said.

Releasing the text of a letter addressed to John D. Small, head of the Civilian Production Administration, Mr. Linthicum pointed out that prior to passage of the Lend-Lease bill "England exported creosote

and imported fuel oil, utilizing the same tankers. A favorable trade balance was thereby created. After Lend-Lease (March 1941) England abruptly curtailed creosote exports, which action leads to the obvious conclusion that England felt relieved of any obligation to pay for fuel oil so it decided to reserve its supply of creosote for use as fuel also."

Several cargoes were released by England a few months later after considerable urging on the part of officials in Washington; however, no imported creosote has come into this country since early 1942, he explained. Creosote requirements of the United States have been partially supplied from foreign sources for many years and normal imports from 1931 through 1940 averaged 39,668,062 gallons annually or 27.7 per cent of total consumption, the greatest part coming from England.

"During the war years domestic steel and coke production increased with a corresponding increase in creosote production (creosote is a by-product of coke production). At the same time railroad, utility, and

(Continued on page 208)

'46

Is a Year for Action **IN DALLAS**

Big things are going forward in Dallas during '46 . . . big construction . . . big expansions . . . big civic improvements . . . big increases in the number and volume of industrial, financial, wholesale and retail transactions.

More houses, apartments, hotels, factories, stores and shops will be built and occupied. More people will be producing and consuming more things during this first full scale peacetime year. All of which adds up to opportunity in Dallas.

Not inconsiderable among the factors which spell opportunity in this "city with the fabulous future" is the modern, dependable, low-fare Transit Service which unites a widespread community with a network of street car, bus and trolley coach lines. Wherever people go in Greater Dallas, Transit Service conveniently meets their travel needs.

For opportunity . . . come to Dallas, the hub of the most dynamic area in America. Come to Dallas for action in '46, for better living all the time.

DALLAS RAILWAY & TERMINAL COMPANY

Interurban Bldg., Dallas, Texas

PORT CITY STOCK YARDS Co.

HOUSTON, TEXAS

Competitive market

for

ALL TYPES OF LIVESTOCK

*Scales Tested Under Government
Supervision*

BONDED COMMISSION FIRMS

Owned and Operated by Cattlemen

J. W. SARTWELLE, President

Why Industry Is On The Move



HERE is the place to give your business a fresh start toward bigger achievements. If you are planning to expand, decentralize or relocate—consider San Antonio's advantages.

Because of these advantages, there has been a decided step-up in the number of industries established here. Accelerated by the war, the industrial development of San Antonio and its trade territory has continued to go forward at a steadily increasing pace. Industrial employment is up 7% over V-J Day, 33% over 1940. Value of manufactured goods has increased 35% over 1939.

Your products should find ready outlets, along with the rising flow of San Antonio made goods, in nearby growing markets. For population and buying power are also gaining.

The majority of plants in San Antonio employ less than 250 workers. Conditions are ideal for smaller, decentralized fabricating and manufacturing plants. Opportunities abound also for uses of the area's rich natural resources.

Write today for detailed information relating to your particular industry.

MUNICIPAL ADVERTISING COMMISSION

San Antonio TEXAS

Arthur E. Biard, Chairman
1001 Majestic Building, San Antonio 5, Texas

STABLE LABOR SOURCES

Industrial concerns of San Antonio enjoy real freedom from paralyzing labor difficulties. A substantial pool of skilled labor is available—war-trained in industrial skills. Labor is more contented working and living here.

DEPENDABLE, LOW COST FUEL, POWER

Here, industry is independent of conditions creating fuel shortages in other areas. Natural gas is available in unlimited quantities, for fuel or chemical processes. Municipally-owned electric utility furnishes power at rates inviting industrial usage.

HEALTHFUL, MILD CLIMATE

Tourists and health-seekers from all parts of the nation find San Antonio's climate ideal. Industries find this climate advantageous too. For it results in lower production costs, less heating of plants, better living conditions and improved health for employees. Employees and plants produce more in sunny San Antonio!

GROWING MARKETS NEARBY

An increase of 125% in 1945 over 1941 in effective buying income of the 112 counties comprising San Antonio's trade area is reported by Sales Management. Buying income last year was reported as \$2,138,109,000. Retail sales of the area increased 73% since 1941, in 1945 totaling \$1,050,872,000. Buying income in Bexar county in the same period advanced 99%, to a 1945 total of \$475,215,000. Retail sales between 1941 and last year rose 64%, to a 1945 total of \$185,324,000.

RAIL, AIR AND WATER TRANSPORTATION FACILITIES

Three major rail lines serve the city. Five airlines provide passenger service, and three of these offer air-freight facilities. A large contract air freight carrier with headquarters in San Antonio furnishes nationwide, non-scheduled service to air shippers. Water transportation to all the world is at nearby Texas ports.

PURE, AMPLE WATER SUPPLY

For manufacturing processes requiring water of utmost purity, San Antonio offers a virtually inexhaustible artesian water supply unexcelled anywhere. Rates are low, permitting liberal usage for cooling, air conditioning and industrial purposes.

NO STATE INCOME OR SALES TAXES

Encouraging to many industries is the fact that Texas has no state income or sales taxes.

UNEXCELLED LIVING CONDITIONS

One of America's cleanest cities, San Antonio offers residential advantages which add much to the contentment of workers. Nationally famous parks, swimming pools, golf courses and other recreational facilities make life more interesting and pleasant here.

GATEWAY TO LATIN AMERICA

Industries locating in San Antonio find vast, ready markets for their products south of the border—only a short distance away. This city is heavily patronized by businessmen of Mexico, and with air routes opening to all the Americas—San Antonio is indeed the "Gateway to Latin America"—and new profits for your business!

Wood Preservers' Convention Reported

(Continued from page 206)

industrial construction requiring creosote decreased and the domestic creosote supply was almost equal to the demand. The result was, however, that creosote inventories were gradually reduced and by the end of 1945 the bottom of the barrel had been reached," Mr. Linthicum said.

"With the termination of hostilities, it was anticipated that England would resume the exportation of creosote but to date export licenses have been unobtainable. We believe that England is fully aware of the important part that creosote plays in our domestic economy and of their own strategic position so the problem then becomes one for our State Department to solve," he stated, in urging the government to correct the situation at the earliest possible date.

With the demand practically tripled, poles represent the biggest single production item for wood-preservers to hurdle, particularly for southern plants which account

for 75% of all pole production.

According to E. R. Smith, chief, pole requirement staff, Rural Electrification Administration, Washington, D. C., REA cooperatives will require 3,000,000 poles annually starting this year and continuing through 1950. In the meantime, deferred maintenance and expansion plans have doubled the needs of private utilities and other large users of poles. Production in 1944, the latest year for which figures are available, totaled 2,993,823 poles.

Although treated poles, piling and railway ties can be expected to dominate production figures for sometime, the home, farm and industrial market offers the greatest potential for future growth, the Association was told. E. J. Gavin, editor, *American Builder* magazine, Chicago, and an authority on light-load construction, stated that "How far the present long-term decline in the per capita use of lumber will go can depend largely on the wood-preserving industry. As far as I know

you have the only really dramatic story to tell as a merchandising theme for lumber. It is interesting to note that while the volume of treated construction lumber for the light-load building industry increased by 1,233 per cent in approximately 20 years, the per capita use of lumber declined considerably."

He urged that wood-preservers continue to arrange for wider distribution of pressure-treated lumber so that under normal conditions it is readily available to the home builder. A survey shows that several companies are now building or planning to construct facilities that will allow retail dealer stocking of treated forest products.

Modified woods like impreg, compreg, staypack, staybwood, as well as those given a urea-resin treatment (like dimethylolurea) are specialty materials for use where their particular properties are needed rather than improved forms of general utility lumber, Alfred J. Stamm, chief, division of derived products, U. S. Forest Products Laboratory, Madison, Wis., declared

(Continued on page 210)

Why SHERMAN, TEXAS Manufactures More Per Capita than Any Other Texas City—

1. In the heart of the rich Red River Valley—2,000,000 Population in Texas and Oklahoma within 200 miles of Sherman.
2. Six Railroads and Federal, Concrete Highways radiate out of Sherman in all directions. Motor freight lines maintain warehouses.
3. Famous for manufacturing QUALITY products for over EIGHTY years, Sherman has ample skilled industrial labor and the "Know How".
4. With \$23,000,000.00 Banking assets, Sherman has banking facilities for serving small or large business accounts, and for financing.
5. Beautiful Homes, Parks, Playgrounds, Athletic Stadiums, Excellent Schools and Colleges—12 miles from Lake Texoma covering 145,000 ACRES, with abundant fishing, boating and recreational facilities.

Get Further Information from Chamber of Commerce

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Is Tyler



*your new
Texas address?*

FOR YOUR INFORMATION

Just a few short months ago the Tyler, Texas Industrial Foundation was formed and since that time six major manufacturers have begun construction of their new plants in this city at a cost of well over \$2,000,000.00. This sudden interest in Tyler, Texas is well founded! If your organization's expansion program includes a Texas location, do not overlook Tyler and East Texas.

WE SOLICIT
YOUR EARLY
INQUIRIES . . .

There are many new reasons why Tyler, Texas might easily be your new address . . . that is, if you are interested in a Texas location where climate, transportation facilities, manpower, taxes, and genuine civic cooperation all await you.

Other executives, looking at Texas, have found in Tyler all those qualities they desire for their new plants—you will too! Investigate our offer today.

Nearing the 50,000 population mark—

Lowest natural gas and electric rates—

Ample native-born labor available—

Complete railroad, highway and airway facilities.

No sales tax—no state income tax—

Write . . . **TYLER INDUSTRIAL FOUNDATION**
TYLER, TEXAS CHAMBER OF COMMERCE

V. F. Fitzhugh, Mgr.

Wood Preservers' Convention Reported

(Continued from page 208)

in a technical report.

"The degree of hardening (obtained with urea-resins) is far short of what is commonly believed. Compressive strength and abrasion resistance are increased to about the same degree as with phenolic resins," he said. Other strength properties, when improved, are increased less than the specific gravity. Decay, termite, and marine borer resistance appear somewhat inferior to that obtained with phenolic resins."

Research work by government and commercial laboratories indicates that wood can be glued-up either before or after treatment with preservative and fire-retardant chemicals, a technical committee on laminated members reported. The compatibility of various resin glues with preservative and fire-retardant chemicals has been determined in practically all cases and application of this type of construction to commercial buildings, boats, hangars, and many kinds of equipment was

noted by the committee.

The German wood-preserving industry was far behind the United States during the war, according to F. W. Gottschalk, technical director of the American Lumber and Treating Co., and a member of the U. S. Technical Industrial Intelligence Committee that investigated German industrial developments after V-E day.

The 35 German plants produce railroad cross-ties almost exclusively; these total about four million annually, or less than 10 per cent of the U. S. production. Cylinders for treating are small by comparison with those used in this country, he said. The diversified use of treated wood for farm, home and industry is unknown in Germany.

Portland, Ore., was selected for the site of the 1947 convention and R. H. Rawson, consulting timber engineer, Portland, was named president of the Association, succeeding J. H. Bremicker, Pennsylvania Railroad, Philadelphia. A. J.

Loom, general superintendent of timber preservation and tie-treating plants, Northern Pacific Railway, Brainerd, Minn., was named first vice-president and G. B. McGough, superintendent, Bond Brothers, Louisville, second vice-president. H. L. Dawson, Washington, D. C., was re-elected secretary-treasurer.

The "Flying Mailcar"

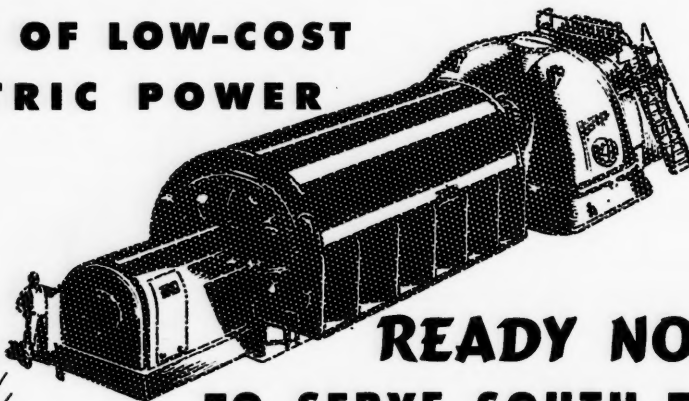
THE Fairchild Aircraft division of Fairchild Engine and Airplane Corp., Hagerstown, Md., has developed a 200-mile an hour "flying mailcar with large capacity and long flying range for use in improving the air mail service between major American cities.

The all-mail Packet, according to Richard S. Boutelle, Fairchild vice president, is a modification of the Army's "flying boxcar," which is so large that it carries tanks, guns, troops and supplies. The plane is capable of carrying up to seven tons of airmail.

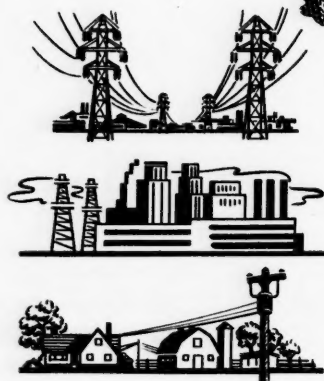
"We have adapted the interior of the Packet's squared fuselage to the

(Continued on page 212)

PLENTY OF LOW-COST ELECTRIC POWER



**READY NOW...
TO SERVE SOUTH TEXAS**

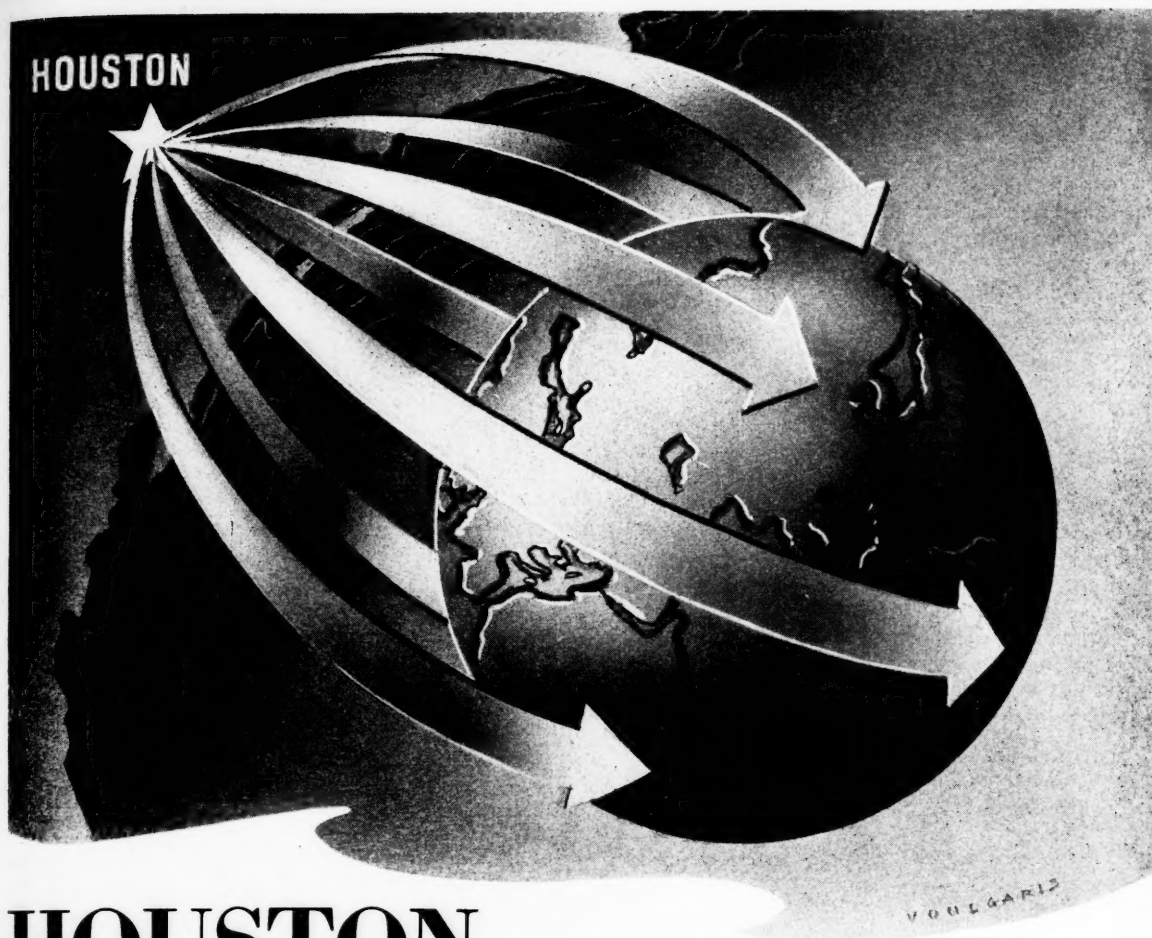


Business and industry, and electric power, have a mighty task ahead in South Texas . . . but it's a job that will be done with pleasure. All are teamed together in a gigantic effort toward the greatest era of production and prosperity this area has ever known.

Fully realizing its responsibilities in this postwar plan, this company pledges every effort toward maintaining a plentiful supply of low-cost electric power whenever and wherever it is needed, with dependable, 'round-the-clock certainty.

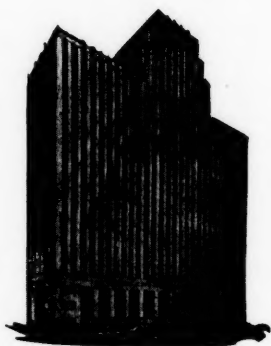
Houston Lighting and Power Company
PRODUCERS OF LOW-COST ELECTRIC SERVICE

HOUSTON



HOUSTON....

Texas' Port for World Commerce



The new 24 story City National Bank building, now under construction, was the first post-war building project of the Southwest.

With completion of the turning basin at the edge of Houston's city limits, following conversion of Buffalo Bayou into a passageway for ocean going vessels, Texas had a major seaport and a direct connection with the markets of the world.

Within five years of the port's opening, Houston became the largest city in Texas and second largest in the South. Population, with its attendant business and industry began to climb sharply with a comparably sharp rise in import and export tonnage through the port. Houston soon ranked third among the seaports of the Nation.

In the expanding and growing world markets of the forthcoming years, Houston will continue in ever increasing significance as a port of world trade.

Attuned to this progress, the City National Bank has been serving the banking and financial requirements of many of the firms and industries of Texas and the South who are assisting in this development. Through the facilities of our foreign department we are prepared to handle all transactions abroad for those doing foreign business.

The CITY NATIONAL BANK OF HOUSTON

MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

JULY NINETEEN FORTY-SIX

The "Flying Mailcar"

(Continued from page 210)

needs of the Post Office Department, installing such postal equipment as a sorting table, letter rack, chutes, locked drawers for registered airmail, and bag racks," said Mr. Boutelle. "The equipment, lighter than that used in railroad mailcars, is more compact and more efficient."

The Packet can handle mail loads up to six tons on a 500-mile non-stop trip, he added, or more than four tons on a 1,200-mile non-stop flight, roughly the distance between New York and Miami. The plane's cargo hold, 38 feet long, is shaped like a railroad boxcar and has approximately 93 per cent as much cubic capacity. Huge double doors in the rear split open like a clamshell to make a loading door, at truckbed height, more than eight feet square. Mail trucks can back to the door for ease and rapidity of mail loading and unloading.

Mr. Boutelle stated the plans drawn up by company engineers emphasize convenience and efficiency

in the working section of the plane. In addition, "soothing colors, fluorescent lights, with accent on modern design and comfort, will make working conditions pleasant for the mail clerk. They will reduce fatigue and monotony on long trips. All the equipment will be specially designed of lightweight plywoods and metals. One innovation will be an oval letter case with every pigeonhole equally accessible. An intercom phone will give the mail clerk constant communication with the pilot's compartment and other sections of the plane."

It is generally believed Congress will approve a five-cent airmail rate proposed by Postmaster General Robert E. Hannegan and the subject of recent bills (S. 1858 and H.R. 5560) introduced by Senator James Mead (D-N. Y.) and Representative Charles E. McKenzie (D-La.). As such a low rate would undoubtedly give rise to an increased volume of airmail, Post Office officials have been discussing the possibility of encouraging the airlines to run all-mail planes, without passenger, at certain times of the day when the

volume of airmail is especially heavy.

"The Packet looks like an ideal plane for this job," commented Robert S. Burgess, superintendent of airmail service, U. S. Post Office. "It's large enough, fast enough, and quick to load. There's plenty of room inside for one, two, or even three clerks to sort the mail enroute."

"One of our greatest difficulties," he said, "is to move the airmail as quickly as possible during peak collection periods—at the close of the business day, for example. Today, time is lost because the peak load of airmail is distributed among several planes leaving hours apart."

"If the airlines operated a few all-mail planes, schedules could be set to correspond with these peak periods in mail traffic."

Only about one-quarter of the mail shipped in the Packet would require sorting, Mr. Burgess explained. The rest would be "storage mail" in bags addressed to specific points.

Although dropping off mail to

(Continued on page 214)

From Factory Planning to Factory Management
A Complete Industrial Consulting Service

★

HARRY S. CROWDER

Industrial Consultant

INSURANCE BUILDING

FORT WORTH, TEXAS

MEMBER
FORT WORTH CHAMBER OF COMMERCE
WEST TEXAS CHAMBER OF COMMERCE

OIL CITY IRON WORKS

Contract Machine Manufacturers

ESTABLISHED 1886

CORSICANA, TEXAS

**GRAY IRON CASTINGS
MACHINE WORK**

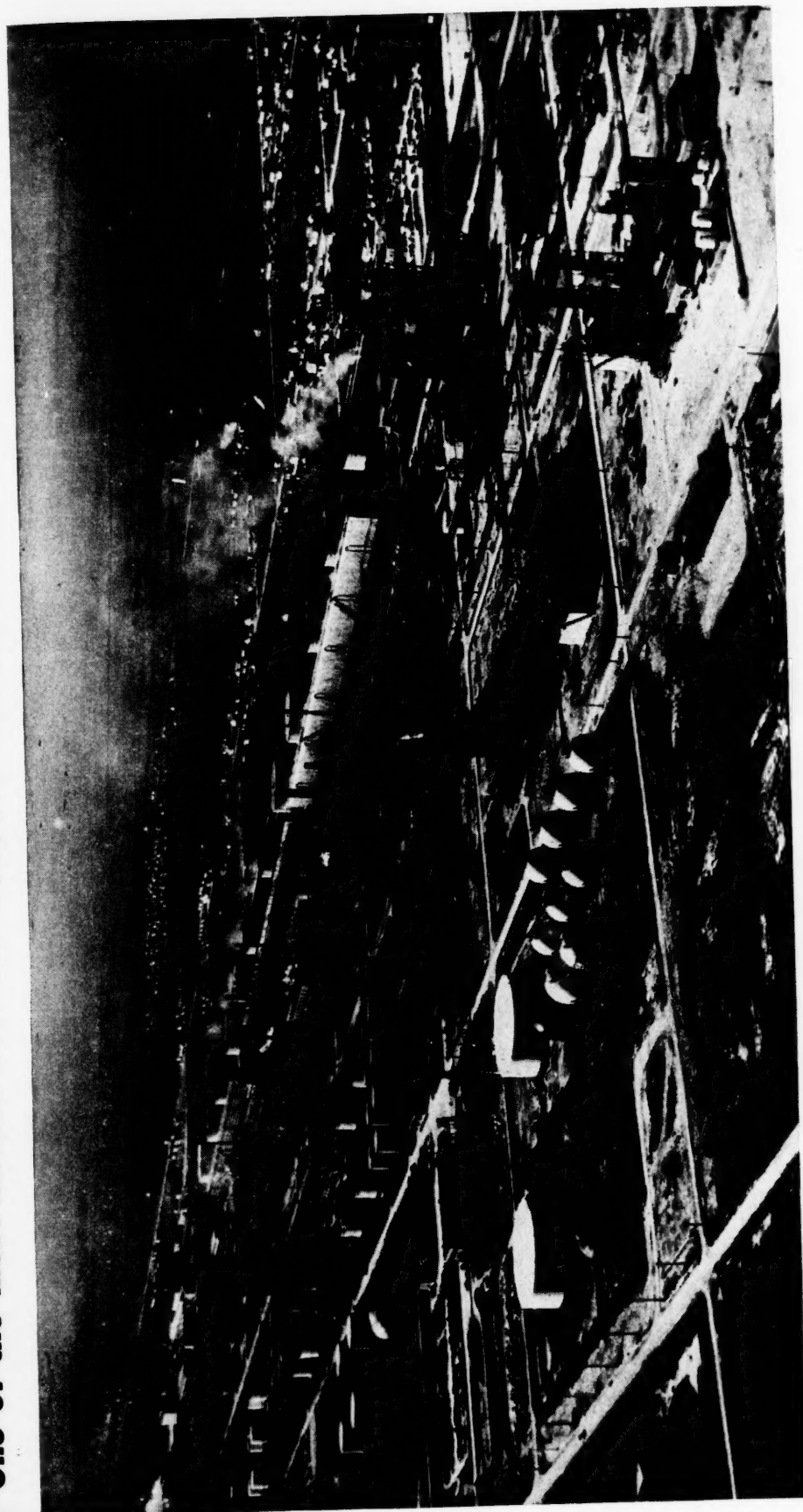
Garbage Incinerators

FOSTER LUMBER COMPANY

LAND AND TIMBER

FOSTORIA, TEXAS

"One of the most modern and best-equipped refineries in the world," says *loading Oil Journal*



Only 14 years ago this refinery that covers 800 acres was just a dream in the minds of men. Their belief in Texas City was justified! Today this refinery is world-famous and

employs 2200 men and women of Texas City and vicinity. It serves industry, the farm, the home and many millions of motorists in the eastern section of the United States.

PAN AMERICAN REFINING CORPORATION, TEXAS CITY, TEXAS

The "Flying Mailcar"

(Continued from page 212)

small communities is not contemplated in present plans, there is a possibility that this feature might be developed. As an Army plane, the Packet was designed and is being used for paratroop and airborne operations. It can be easily adapted to drop cargo parachutes over airports too small for a landing. The twin-engine plane can also operate from smaller runways than commercial airliners, and thus serve cities that are not now on airmail routes.

Another possible development in postal service is air parcel post, which has been under discussion for some time. Mr. Burgess stated that the facilities of the Packet would be ideal for this relatively new development.

NEW DI-ACRO CATALOG

A new edition of Di-Acro catalog No. 46-10 has been issued by O'Neill-Irwin Mfg. Co., Minneapolis 15, Minn. The booklet summarizes developments made in "Die-Less Duplicating" during the war years together with improvements that have been made in Di-Acro precision machines. Latest models are illustrated in the new catalog. Special attention is directed to the application of two Di-Acro benders which are illustrated in the catalog.

Lion Installing Thermoform Catalytic Cracking Unit

Lion Oil Co. has contracted for installation of a Thermoform Catalytic Cracking Unit in its 20,000 barrel per day El Dorado, Arkansas refinery, according to T. H. Barton, president. This represents Lion's first major postwar improvement to refining facilities and will serve to maintain the company's favorable position in the premium grade motor fuel market.

Construction of the unit will be under the auspices of the Lummus Company. The unit, which will be capable of processing 45,000 barrels per calendar day of heavy gas oil charging stocks, will be of the most recent type which embodies simplification of the Thermoform kiln elevator system for handling spent and rejuvenated catalyst as well as a reduction in structural requirements as the result of more compact design.

The unit will utilize gas oil charging stocks currently being processed in conventional type thermal equipment, and will be operated to produce a maximum yield of catalytic

base stock for blending into high octane, high road performance motor fuels. As the result of this type of operation, a high percentage of premium grade burner oil will be produced. Additional enhancement of octane rating of motor fuels produced within the refinery will be realized by conversion of present thermal cracking facilities to reform low octane straight run naphthas and low end point selective gas oils.

Additional polymerization unit feed stock that will be made available as the result of the catalytic cracking operation, and which will be supplemented by future selective reforming operations will result in substantially increased production of high blending value poly gasoline and proportional improvement of finished motor fuel quality.

Engineering and construction work pertaining to revision of present thermal cracking facilities, as well as gas concentration and catalytic polymerization units, will be conducted by Lion personnel. Before contracts were let, Company

(Continued on page 216)

SAMSCO

GREY IRON & BRASS FOUNDRIES
MACHINE & BOILER SHOPS

SAN ANTONIO
MACHINE & SUPPLY CO.

San Antonio, Texas

ONYX REFINING CORPORATION

is playing its part in the development of the Empire of West Texas. Our crude produces as fine a line of Gasolines as are obtainable. Inquiries from Jobbers are solicited.

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MODERN, FIRESAFE, TERMITE-PROOF HOMES — For Your Employees



Mass-Produced
BY
TOURNALAYER

The modern, reinforced concrete, Tournalayer-built home is the culmination of more than 10 years' experience in mass home building.

R. G. LeTourneau realized a decade ago the need for some way to produce good, durable homes—and produce them fast for the employees of his own factories which had already expanded into several states. This led him to experiment with many types of building materials and methods. Entire small communities were built of welded steel and monolithic reinforced concrete of numerous non-conventional designs.

By means of the giant Tournalayer, your home-shortage can be greatly alleviated now. One Tournalayer with one set of house forms has already exceeded the rate of twenty houses per month. On this basis one Tournalayer with four sets of forms can produce eighty houses per month.

Manufacturers who are faced with employee housing problems are invited to correspond with the Tournalayer Division in Longview. Write today for your copy of "CONCRETE HOMES OF DISTINCTION"—a booklet of architectural renderings and a description of the Tournalayer.

R. G. Le TOURNEAU, Inc.
LONGVIEW, TEXAS

Lion Thermoform Unit

(Continued from page 214)

engineers and officials devoted several months to study of the country's most modern cracking units in determining the type best suited to its needs. Approximately ten months will be required for completion of the project.

New-Type Bearing Designed

Development of a new type of roller bearing capable of carrying heavier loads at higher speeds and lower temperatures is announced by SKF Industries, Inc. William L. Batt, president of the ball and roller bearing company, said the new development, technically known as a spherical roller thrust bearing, climaxes a 10-year research program to solve the difficult problem of combining in a single bearing the triple features of high-load capacity, speed and low temperature. Heretofore, this triple combination of bearing principles has been a prime engineering and research puzzle. He also said the new-type spherical roller thrust bearing is expected to facilitate wind tunnel operation for research into such aeronautical projects as gas turbine and jet propulsion speeds and designs, and to ease maintenance and operating problems on large vertical water pumps, electric generators and other high-speed machines.

TRADE LITERATURE

HEAT TREATMENT BOOKLET

A discussion of the fundamentals of heat treatment has been prepared by the research and technology department, Carnegie-Illinois Steel Corporation, United States Steel Corporation Subsidiary, 429 Fourth Ave., Philadelphia. This 2-color, 54-page booklet, illustrated with charts, diagrams and photographs, devotes 26 pages to factors concerning hardness, covering heating, pearlite, bainite, martensite, S-curve, hardenability, and quenching. The next 26 pages relate to toughness, covering such factors as tempering, shape of piece, notch-bar, austempering, stresses, and cracking. Six statements summarize the detailed explanations. Copies may be secured from any office of American Steel and Wire Company, Carnegie-Illinois Steel Corporation, Columbia Steel Company, National Tube Company, or Tennessee Coal, Iron and Railroad Company.

FOREIGN TRADE HANDBOOK

The Committee for Economic Development has produced "A Handbook of International Trade," which is being distributed from the Committee's New York headquarters at 285 Madison Ave., and by the Bureau of Foreign and Domestic Commerce, Washington, D. C. Anyone considering international trade as well as those already in it will find the handbook of value. Primarily it is divided into two sections, plus an appendix. Part One deals with exports from the manufacturer's standpoint.

Part Two deals with imports by manufacturer, wholesaler and retailer.

FOUNDRY MACHINE CATALOGS

American Foundry Equipment Co., 555 South Byrkit Street, Mishawaka, Ind., has published two new catalogs describing their line of foundry equipment. Catalog No. 25A describes the Model "AM" Sandcutter. This 12 page catalog includes all pertinent specifications and dimensions on this machine together with many photographs showing the construction and operation of the Sandcutter. Brief descriptions of the other models in the Sandcutter line as well as illustrations of each machine are included in this catalog. Bulletin 10A describes the Core Rod Straightener & Shear Machine. This 8 page bulletin describes all the models of this useful foundry machine and includes many illustrations as well as specifications and operating data.

RADIANT HEATING BOOKLET

A new booklet entitled "Radiant Heating," covering the use of copper tube in radiant heating systems, has been published by the Copper & Brass Research Association, 420 Lexington Avenue, New York 17, N. Y. Non-technical in nature, this booklet discusses the history and development of radiant heating and enumerates some of the advantages claimed for this system in modern construction. Numerous examples of successful installations of all types from coast to coast, employing copper tube with soldered fittings, are cited and illustrated in this publication. The booklet is designed to give the architect, engineer and the plumbing and heating and building contractor—as well as the layman—a comprehensive survey of the ever-growing employment of radiant heating in this country, and the role of copper tube in these systems.

1946 PLASTICS CATALOG

The 1946 Modern Plastics Catalog is being distributed. What plastics are, how they are made, to what uses they are put, their various industrial applications and probable additional future uses—comprise this reference book. Price is \$6.00 per copy to addresses in the United States and United States Territories and \$7.00 to all other destinations and remittance in New York funds must be sent with order. Address Modern Plastics Catalog, 122 E. 42nd St., New York 17, N. Y.

FORESTS RETARD FLOODS

The Forest Service, U. S. Department of Agriculture, has announced publication of a new booklet showing the role of denuded forest land and unwise use of forests on upland watersheds as a major contributor to such disasters as the floods resulting from recent heavy rains that have caused at least ten deaths and widespread property damage in Pennsylvania, New York and Connecticut. The booklet makes clear how well-managed forested uplands hold back the water so that instead of rushing down the slopes and into streams in flood proportions, it sinks slowly into the ground and is released slowly over a comparatively much longer period of time. Copies of the bulletin, Miscellaneous Publication Number 600, may be had by writing to the Forest Service, Department of Agriculture, South Building, Washington 25, D. C.

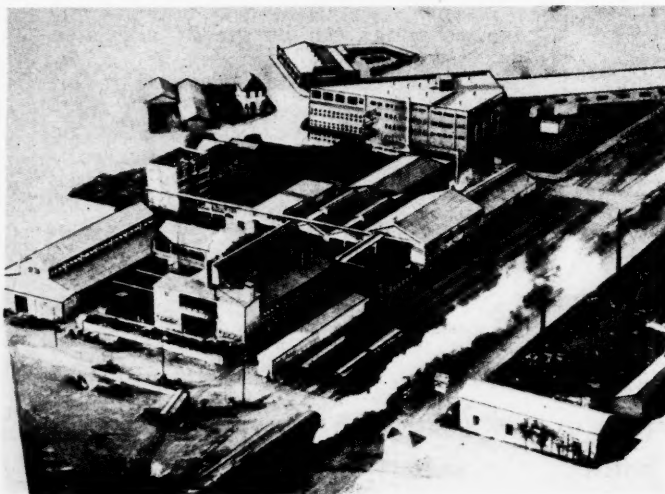
ROTARY BLOWER CATALOG

Roots-Connersville Blower Corp., Connersville, Ind., has issued Bulletin 22, B-12 covering Rotary Positive Blowers, containing 24 pages, including the cover. These blowers are represented as built in a wide range of sizes, from 5 to 50,000 CFM, at pressures up to 30 pounds, and for vacuums up to 28 inch Hg. In addition to numerous installation illustrations, there are characteristic curves, cross-sections, and exploded views to show the operating principle and construction features. Relief valves and other accessories are illustrated and described, and there is a page of detailed specifications, and a table of standard sizes covering gear diameters from 8 to 22 inches.

(Continued on page 218)

ALAMO IRON WORKS

San Antonio, Texas



FOUNDED 1878

NEW BRAUNFELS TEXTILE MILLS

NEW BRAUNFELS, TEXAS

HOUSTON TERMINAL WAREHOUSE and COLD STORAGE CO.

Member American Chain of Warehouses, Inc.

Thomas M. Smith, Pres.

Houston, Texas

The refiners of famous Premier Ranger Motor Oil

. . . offer you Industrial
lubricants and process products
that can help solve many of
your production problems.

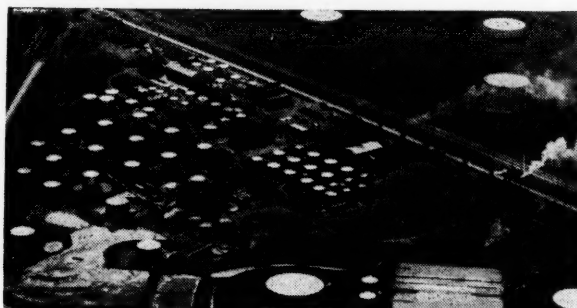


If you have a problem that might be solved by the proper application of a special lubricant . . . or if you need a dependable source of supply for high grade paraffin, petroleum jelly, blending oils, or other petroleum products, you are invited to submit your problem to Premier Oil Refining Co. of Texas. Our modern research and plant facilities . . . combined with plenty of "know how" gained in the development and production of premium quality lubricating oils . . . are at your service.

Please write to our general offices at Longview, Texas.

For Good Entertainment . . .

listen to PREMIER TIME
with the "Early Birds", Monday,
Wednesday, Friday, 7:15 A.M.



The Fort Worth Premier refinery from the air.

For Smooth Motoring . . .

ask for Premier RANGER
Motor Oil at your neighbor-
hood independent service station

PREMIER OIL REFINING CO. OF TEXAS

GENERAL OFFICES: LONGVIEW, TEXAS

REFINERIES: LONGVIEW, FORT WORTH, AND BAIRD, TEXAS; COTTON VALLEY, LOUISIANA



SISYPHUS was a sissy

Remember your mythology? This was the strong, crafty, Greek, condemned to roll to the top of a hill a huge stone which constantly rolled back again—making his task incessant. Maybe in his day we might have had some difficulties, too—but not today! Science teams up with good sense, strength and long service at the Virginia Engineering Company. The tougher the assignment, the more we push! And many a time it is just that extra shove that accomplishes the impossible—that brings a structure into being—that makes a worthy contribution to American enterprise.



CHALLENGE IN A STAMP

May we tell you the entire story of Virginia Engineering Company? Write today.

VIRGINIA ENGINEERING COMPANY, INC.
 NEWPORT NEWS, VA. — MIAMI, FLA.
 BUILDING • HIGHWAY & HEAVY CONSTRUCTION
 MECHANICAL • ELECTRICAL • UTILITIES

Contractors to American Industry
 WE BUILD TO YOUR DESIGN

TRADE LITERATURE

(Continued from page 216)

STRAINER BULLETIN

A new 16 page, two color illustrated Bulletin No. 46-50 describes complete line of ADSCO strainers and separators. The bulletin gives dimensions and list prices on Y type strainers, the Type T strainer, large pipe line Macomb type strainers for water or oil service, horizontal and vertical separators for steam, air or gas service as well as receiver separators for various installation conditions. The strainers and separators are designed for easy access for removing foreign matter with screens or baskets furnished in various metals depending on service conditions. Bodies can be furnished in semi-steel, steel or bronze for marine service as required. A copy of the bulletin may be obtained upon request from American District Steam Co., North Tonawanda, N. Y.

AUTOMOTIVE PARTS CATALOG

An inventory of all surplus automotive parts now available to dealers through the War Assets Administration is located in the regional office of the WAA in Richmond. Each twenty-four hours the inventory is corrected through sales and distribution according to sales and disposals by the Detroit Office. This catalog is broken down and classified according to types of equipment and named automobiles. Ample desk space is provided and personnel are available to assist dealers who wish to scan this list and compare it with their own inventory in the WAA office in Richmond.

CHEMICAL BOOKLET ISSUED

A new booklet listing Hercules chemicals and industrial explosives, and more than fifty industries which utilize these products, is now available from Hercules Powder Company, Wilmington, Del. The products are first indexed according to various industries in which the chemicals and explosives are used and then according to chemical families. An indication of applications for Hercules chemicals in plastics, paints, textiles, film, adhesives, paper, rubber, and insecticides is given in the new booklet. Chemicals discussed in the booklet include the cellulose family, rosin family, synthetic resins, terpene solvents and chemicals, chlorinated products, explosives, blasting supplies and sporting powders, and special products.

OKLAHOMA CITY DEPICTED

"A Quick Look at Oklahoma City," an eight-page brochure giving many of the salient facts about the southwestern metropolis, has been prepared by the Oklahoma City Chamber of Commerce. Illustrated with nearly forty photographs, the pamphlet answers many of the questions arising in the minds of those seeking a new location for a business.

Hardwood Production Ahead

(Continued from page 202)

indications are that the current year's aggregate cut will exceed that of 1945 by at least 10%, and probably more. This, of course, is contingent upon improved operating conditions throughout the South during the next six months. For the past thirty days, excessive rainfalls have been reported in most of the Southern area, which reaches from Virginia through Texas. Should these rains continue, production will do well to equal the 1945 figure. However, the normally dry season is expected to start soon in this area, which means that greater production of hardwood lumber may be expected within a reasonable time allowed the mills to get their logging crews back into the woods.

The misconception as to the volume of hardwood lumber being produced stems from the difficulty—and often the inability—of traditional users of hardwoods in obtaining their full requirements as they had been able to do prior to the war. At least a partial basis for this seeming "shortage" lies in the unprecedented diversion of hardwoods to retail outlets for construction purposes. This is due to the insufficient quantity of softwoods available for building projects, as well as their dwindling production volume. The trend in softwood production during the first quarter of this year was the reverse of that in hardwoods, the figures of the National Lumber Manufacturers Association showing the nation's softwood output at 4,352-million feet, compared with 5,429-million feet produced a year ago, or a decrease of nearly 20%. This downward trend has continued since 1942.

— Mr. Manufacturer —

WHAT YOU SEEK, LONGVIEW CAN SUPPLY

Labor Supply

1. **CONSTANT** supply of skilled, semi-skilled and unskilled labor. Skilled labor with background of oil field and machine shop training. Average of 2,000 available workers, both male and female, in practically every field available in normal times. One hundred per cent record of no labor disturbances.

Fuel

2. **UNLIMITED** supply of gas and fuel oil at nominal cost. A potential of trillions of cubic feet of natural gas and five billion barrels of oil in the immediate Longview area.

Power

3. **AMPLE** power supplied by the Southwestern Gas and Electric Company and interconnecting companies. Rates comparable with any other locality. Connected with southwest "power pool." Standby power plant at Longview assures a dependable twenty-four hour service at all times.

Transportation

4. **THREE** main railroad lines; Texas and Pacific, Santa Fe, and Missouri Pacific, serve you and carry your products to every section of the country. Twelve passenger trains daily, four bus lines, and two air lines serve Longview. Four additional air lines scheduled to serve Longview.

Civic Considerations

9. **POPULATION** of 25,000, three newspapers, broadcasting station, four theaters, thirty-seven churches, modern schools, temperate climate, 829 retail establishments, seven hospitals and clinics, and five parks.

Water

5. **ADEQUATE** and dependable supply of water practically pure and free from solids and chemicals.

Industrial Sites

6. **BOTH** large and small, ideally situated in and near the city with railroads and other necessary facilities easily obtainable.

Marketing Possibilities

7. **THE** southwest marketing area is one of the most attractive in the United States in view of these constituents: (a) majority of inhabitants own homes, farms, or ranches; (b) prodigious purchasing powers; (c) production of new wealth; (d) standard of living above the average of other similar areas reflected in the per family and per capita incomes; (e) high percentage of native white population; (f) constant increasing density of population; (h) adequate transportation facilities.

Resources

8. **PETROLEUM** products, largest remaining high grade iron ore deposits in the United States, large deposits of lignite and clays, commercial timber, agricultural products, dairy products, and livestock.

LONGVIEW, TEXAS

IS THE FASTEST GROWING, MOST MODERN AND PROGRESSIVE CITY IN THE FABULOUSLY WEALTHY EAST TEXAS AREA. R. G. LeTOURNEAU CHOSE IT FOR HIS HOME AND SITE FOR HIS LARGEST MANUFACTURING PLANT

WRITE LONGVIEW CHAMBER OF COMMERCE

Fertilizer and Research

(Continued from page 188)

eral Atlantic and Gulf Coast States we have recently undertaken a study of the fertility status of soils in potato growing areas where growers traditionally apply a ton or more of fertilizer per acre. Through simple arithmetic we knew that these farmers were applying several times as much phosphorus as the crop removed and this fact, together with the well known fact that little applied phosphorus is lost through leaching, led us to suspect that growers might not be realizing returns from the amounts of phosphorus currently being applied. Chemical analysis of many of these soils showed large accumulations of available phosphorus, and field test showed little or no reduction in potato yields on such soils when the phosphorus content of the fertilizer was materially reduced or even eliminated.

Now we come to our final question, what can research do to further improve the quality of fertilizers or lower plant food costs? This is probably the \$64 question, since fertilizers now are among the cheapest commodities purchased by farmers and their quality, measured in terms of plant food availability, is not far below the theoretical maximum.

Probably first consideration still should be given to reducing the final cost of plant food placed in the soil by increasing the concentration of mixed fertilizers. The practical limits will depend on unit costs of plant food in various materials at the mixing plant and on the distances the final product is shipped. These will vary in different regions. An average plant food content of 25 per cent appears practical for the country as a whole from both technical and economic points of view. There will be some areas, of course, where the availability of cheap low-analysis materials will make it unprofitable, both for the farmer and manufacturer, to exceed or even reach 25 per cent. On the other hand, there are some areas where the most economical concentration should reach at least 30 per cent and perhaps go as high as 40 per cent.

We recognize that as the concen-

tration of the major plant foods is increased there is progressively less room not only for conditioning agents but for the secondary elements, calcium, magnesium and sulfur and for the trace elements, manganese, boron, copper, and zinc. However calcium and magnesium usually can be applied more cheaply and adequately in the form of locally produced limestones. Sulfur, now relatively unimportant, may become critical in a few regions if the amount of ordinary superphosphate in mixtures is greatly reduced. Trace elements are required in such small amounts, if at all, that their inclusion will not be a serious problem, except perhaps in the most concentrated mixtures.

Problems of formulation, caking, segregation, moisture control and drillability will increase with concentration. Granulation and better packaging undoubtedly will provide the solution to many of these problems and research to the rest.

Increased recognition of the role of the minor elements in plant nutrition, and better delineation of the areas in which soil deficiencies of these elements occur are focusing attention on their inclusion in mixed fertilizers. Examples are the need for boron on alfalfa in the South and East, for certain vegetable crops along the east coast, and for sugar beets on particular soils; the need for copper and manganese on crops in the Florida Everglades; and the need for zinc on pecan trees. Inclusion of these elements in mixtures is primarily a question of determining the proper quantities for specific soil and crop conditions.

A promising field for research is in developing non-leaching synthetic compounds which will gradually release nitrogen to plants at predetermined, controllable rates. Such compounds should be particularly useful in fertilizing forage and other long season crops and for use on sandy soils where leaching is a problem. Enough work has already been done by our Bureau to demonstrate that compounds having the desired properties can be prepared.

Can similar non-leaching potash fertilizers for sandy soils be de-

(Continued on page 222)

South Pushes Wood Research

Progress in Southern forest products research held a strong spot in discussions of the State and Federal forest research exposition held recently at Madison, Wis.

It was revealed that at Virginia Polytechnic Institute studies are conducted on the wood-using industries of the state and their marketing practices; the mechanical properties of woods; prefabrication, and cellulose chemistry. The Institute is extending consultation services to TVA as well as wood-using industries both in and out of the state.

Kentucky is weighing methods for utilizing second growth timber.

Investigations aimed at expanding wood-using industries in Florida to make fuller use of that state's 22 million acres of forest lands are under way. The School of Forestry, Engineering and Industrial Experiment Station has a modern experimental dry kiln and equipment to do research in chemical treatment of wood and in deriving converted wood products chemically for the State's woods.

The Division of Forestry at the University of West Virginia is working out designs for a mechanical pulpwood debarker for use with hardwoods, which are more difficult to debark than softwood and require different mechanical action. Attention there is also being given to development of a truly mobile circular sawmill, as well as to production and marketing of minor forest products. The University's Engineering Experiment Station is investigating reinforced timber beams with steel spiral screw dowels to resist shearing stresses. Tests indicate that the doweled beams have as much strength as solid beams, and also to have increased deflection.

Outlining of the projects taking place in the South were: Wilbur O'Byrne, Virginia Extension Forester; Harry Nadler, assistant director of Kentucky's State Division of Forestry; Prof. H. S. Newins, director of Florida School of Forestry; and Prof. H. D. Erickson of the University of West Virginia.

Southern Paperboard President Chosen

Ernest Rossiter, formerly president of St. Lawrence Corp., Montreal, Canada, has been elected president of the Southern Paperboard Corp., succeeding George E. Dyke, who becomes board chairman.

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INVESTIGATE STARKE, FLORIDA

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NEARBY MARKETS
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NO STATE INCOME TAX . . . NO GENERAL SALES TAX
OR "USE" TAX . . . NO STATE INHERITANCE TAX . . .
NO TAX ON HOMESTEADS UNDER \$5000 VALUATION . . .
NO STATE BONDED DEBT . . . NO STATE REALTY TAX . . .
NO POLL TAX . . .

For Further Information Write
Chamber of Commerce, Starke, Fla.

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An accident on your private siding may force you to pay for a freight car in addition to a lot of other damages—unless your insurance was bought by an expert to cover all your risks.

An insurance buyer must first know where he is liable. Second he should know how to buy complete coverage at the lowest possible cost.



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CHARTERED PROPERTY CASUALTY UNDERWRITERS



We Believe In The South

... Because here is America's last great frontier, challenging the minds and hearts of men of action.

... Because here are vast and scarcely developed resources demanding only vision, courageous leadership and earnest labor to convert them to use and wealth.

... Because here are millions of fertile acres sufficient in their bounty to fill the larders of the nation with rich dairy products and with nourishing foods from the soil.

... Because here is a newly awakened giant beginning at last to feel the power latent in its farms and fields and woodlands, its businesses and industries and the energy of its people.

... Because here is a friendly, kindly people who have dreamed new dreams, seen new visions, gained new skills; who are determined that these things shall not again be lost and that their future shall be one of prosperity and economic greatness.

... Because it is Our South—our matchless homeland—offering boundless opportunity, security and better living for all men.

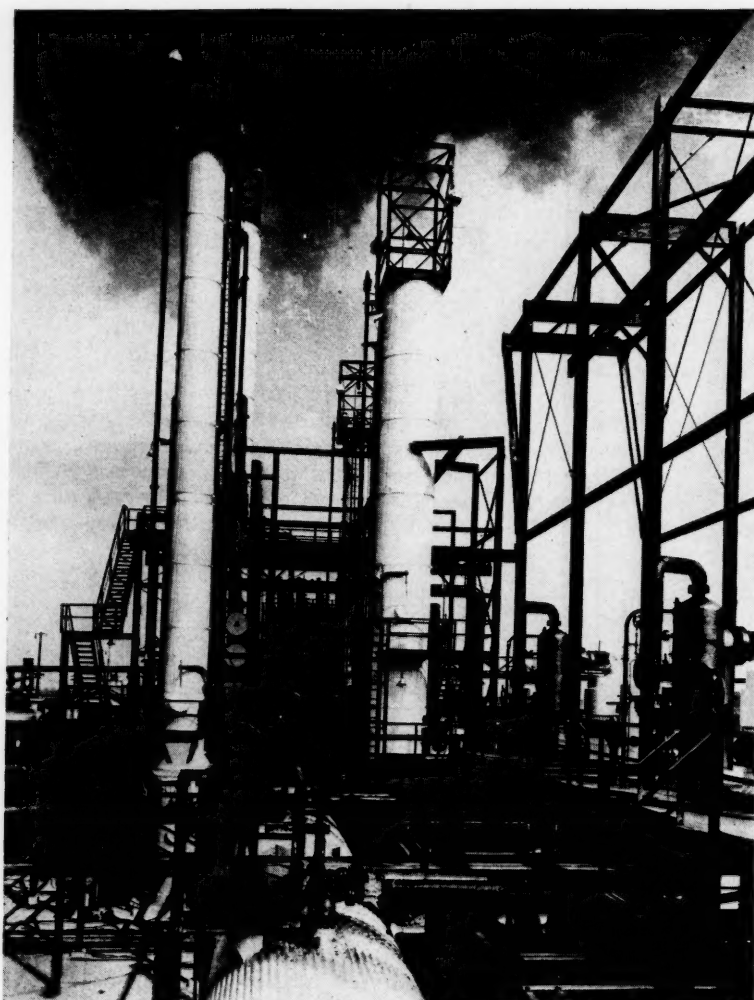
WE PLEDGE our devotion to the South and our untiring efforts to further its growth by doing business in and with the South and with Southerners to the end that the South may soon attain its rightful place of economic leadership in our nation.

Paul E. Reinhold

Paul E. Reinhold
President

FOREMOST DAIRYLAND

General Offices - - Dallas, Texas



Alkylate Production Revealed at Port Arthur Refinery

PRODUCTION of alkylate, the all-important ingredient of high octane aviation gasolines, at the record daily rate of 85,840 gallons since 1939 by the pioneer alkylation unit at Port Arthur, Texas, has been revealed by M. Halpern, Texaco vice-president in charge of refining.

Originally designed for 30,000 gallons daily, this alkylation unit almost trebled this rate every day and is now producing in excess of 120,000 gallons per day. Alkylate is a gasoline blending agent consisting chiefly of iso-octanes.

This unit was the first of five alkylation units and has set an outstanding seven year record of 219,340,000 gallons to meet the fabulous wartime demands for high octane aviation fuels. The unit was

down only for routine safety tests and inspection at six-month intervals.

Pioneering in the field of high powered gasolines, the Texas Company installed this alkylation unit in anticipation of ever increasing wartime demands for super-fuels to power our war machines. Alkylate, which is mainly iso-octane, is developed by the process of alkylation—typically, a union of butylenes with isobutane.

Having served the purpose of ensuring maximum 100 octane production during the war, the Port Arthur unit now makes available vast supplies of high octane blending materials for production of fuels for peacetime aircraft and automobiles.

Fertilizer and Research

(Continued from page 220)

veloped? Our fertilizer research men think they can.

We have inherited from the wartime munitions industry a large capacity for producing cheap nitric acid. Can this be substituted for sulfuric acid for making available phosphates? The problem has already been studied considerably but merits re-examination in the light of present conditions. The ultimate solution may be found in the production of compound fertilizers of the Nitrophoska type.

Is there a possibility of economically utilizing our vast deposits of potash silicates? The problem thus far has baffled solution, and did even before the discovery and development of our western resources of water-soluble potash salts. Perhaps nothing can be done in the face of present potash prices. The fact remains, however, that the deposits of water-soluble potash are far removed from most of the large potash consuming areas, while much of the supply of silicates is in or adjacent to those areas. The problem should not be cast aside as hopeless.

Recent developments in the production of new weedicides, nematocides and insecticides have raised the question of their use in combination with fertilizers. In fact, there is already evidence that such use may be highly desirable in some instances. For example, it appears that the new 2,4-D weed killer may be combined advantageously with fertilizer when applied to turf. Also, outstanding results have been reported from the simultaneous application of DD mixture and ammonia for the control of nematodes and the fertilization of lettuce on irrigated land in the Southwest.

I have mentioned only a few of the advances that may be made through research. That there will be many more, I have no doubt. Both the consumer and manufacturer of fertilizers will benefit. It is up to them both to see to it that the research gets done.

I am not arguing that the fertilizer industry should build up a big research organization to do this job. But, there are some things that the fertilizer industry can and, I believe,

(Continued on page 224)

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"Sounds like opportunity to me!"

If you are looking for a career, your Bell Telephone Company may have exactly what you want—work that's interesting, important and pleasant.

Right now in many places Bell Companies need young women to help meet the demand for telephone service.

Wages and working conditions, good. Associates, friendly. Annual vacations with pay. Benefit payments. Attractive openings of many kinds.

Ask the nearest Bell Telephone employment office to tell you what opportunities there are in your community.



BELL TELEPHONE SYSTEM

JULY NINETEEN FORTY-SIX

Constitutionally Controlled Budget

(Continued from page 186)

or eliminate some of the taxes that are now in existence. We could reduce or eliminate the one or two cent government tax on gasoline, the tax on tires, the tax on titling automobiles, the tax on tobacco, and so forth. If these taxes were stricken from the articles I have mentioned, it would mean many extra dollars in the pockets of the people of the nation which they could spend for the necessities of life. With our large debt, however, the government is forced to collect from five to eight billion dollars a year in order to meet just this part of its expenses.

In sum, the lower the national government's debt, the less the people of this country pay in national government taxes. Consequently, the more the people would have to spend for food, clothing, shelter, and other things they desire to buy.

Again, the higher the national debt goes, the greater is the amount that each and every citizen has to contribute to the national government simply for interest on the government's debt alone. Consequently in such cases the citizen has less and less from his earnings with which to buy food, clothing, and shelter.

No man needs to be a financial wizard to understand this simple arithmetic. There is nothing complicated about it. It is just plain everyday common horse sense. The higher your city taxes are, the more

you must take from your earnings to meet them. The higher your state taxes are, the more you must take from your earnings to pay them. By the same rule, the higher your national government taxes are, the more you must take from your earnings to pay your national government taxes.

The idea of the constitutional amendment compelling Congress to live within its income in peace time is that when this amendment is adopted, you will pay less and less taxes to your National Government each year, and will have more and more money from your wages and income to spend for the welfare of your own family.

For 16 years now this government has been living far beyond its means. We started in the depression when the policy of deficit spending was somewhat justifiable. We got into bad habits then and we have never gotten out of them in 16 long years.

The amendment that I have introduced, however, does contain a safety value. When we get into such difficult times as a deep and nationwide depression, or when there is imperative need of quickly building up our defenses, if war threatens, the amendment provides that Congress may then spend more than it takes in, provided that three-fifths of the members of each of the two houses

(Continued on page 226)

fields both of fertilizer use and technology, but especially the latter.

Now, in conclusion, I would remind you that scientific research is the Aladdin's lamp of the twentieth century. In the brief period between the two world wars and since, it has spawned a veritable flood of new products and techniques, whose contribution, present and potential, to man's comfort and convenience, to his efficiency and escape from toil, to his health and longevity, and unfortunately, to his powers of self-destruction, make the magic of Aladdin's time seem childish and impotent. Already here, or coming, we see a vast array of light metals and alloys in unbelievable abundance; new plastics by the score, including the phenomenal silicones, compounds of silicon and carbon; a dozen new synthetic rubbers, some greatly superior to natural rubber for special uses; new fibers—rayon, nylon and fiber glass with ten times the tensile strength of steel; disease-destroying drugs—the sulfa-compounds, atebirin and synthetic quinine, and the even more potent antibiotics penicillin, streptomycin, and a new one, "tomatin" recently found in wilt resistant tomato plants; the powerful insect killers, DDT and benzene hexachloride; hormone-like chemicals like 2,4-D which in unbelievable low concentration kill weeds, stick apples on trees, produce seedless tomatoes and ripen green fruit; rockets and jet propulsion aircraft with near supersonic speeds; and last but by no means least, such miracles of electronics and radiation as black light, induction heating, television, radar, and atomic power. These products of science, unknown a mere three decades ago, are but portents of what scientific research will contribute to man's material civilization in the years ahead. Following a world war, finally won by technological superiority, peoples throughout the world are awake to the role that science must play in their future welfare and advancement, both as individuals and as nations.

Industry as a whole is moving ahead at ever increasing tempo through technological improvement. Agriculture and the industries serving agriculture cannot afford to lag behind in their use of the tools of science.

Fertilizer and Research

(Continued from page 222)

should do that will stimulate and expedite the research that needs doing.

First, by procedures that will develop a better public understanding of the contribution that fertilizers make, not alone to the farmer but to the national economy as well, you can assist both state and federal research agencies in getting support for their work.

By sponsoring group meetings of state, federal, and industry research workers interested in common problems you can aid in overcoming one of the chief handicaps to all agricul-

tural research, i.e., the lack of easy contact and interchange between research men working along a given line.

Probably you can spend a little more money advantageously in subsidizing research on special problems through fellowships and grants to States. A little financial oil applied to the squeaks in the research machinery often produces surprisingly good results.

Finally, I think there are now, and will continue to be, many opportunities for effective direct cooperation of your industry with government research agencies, in the

Where can you find ample water supply for your new plant?	Where can you find adequate natural resources for your business?	Where can you find a lot of intelligent, friendly workers?
Where can you connect with a large year-round, ice-free port?	Where can you find a fair tax situation for new industry?	Where can you locate your new plant near a fast-growing market?
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"DETECT AND COLLECT"

(With apologies to the B. F. Goodrich radio program)
 "Detect and Collect." Title used by special permission.)



You don't have to affect a Sherlock Holmes hat and peer through a magnifying glass to find the winning answers to questions concerning better plant locations. Reflect on the advantages of the six-state territory served by Norfolk and Western — mild climate, abundant power and natural resources, intelligent and friendly workers, easy access to the national market and direct connections with expanding foreign markets through the great year-round, ice-free Port of Norfolk. Weigh the advantages. Detect and collect. Locate in N. and W. territory.

N. and W. industrial planning specialists will be glad to help you select the site which is perfect for your project. Write to Industrial and Agricultural Department, Norfolk and Western Railway, Roanoke 17, Va.

**Norfolk
and Western
RAILWAY**

FOR BETTER PLANT LOCATIONS

Southern Industrial Expansions

(Continued from page 182)

dehydration plants plus one gas dehydration plant and appurtenant facilities.

ANAHUAC—Gas Plant—Humble Oil & Refining Co. let contract to Sterns-Rogers Manufacturing Co. for gasoline plant; construction cost approximately \$80,000; equipment cost approximately \$2,276,000.

ANGLETON—Plant—Glenn H. McCarthy, Houston, plans \$10,000,000 recycling plant in Blue Lake field, 8 miles northwest of Angleton.

AUSTIN—Radio Studios — KYET, Brown Bldg., Austin, plans one-story radio studios, West 8th St., approximately \$30,000; Niggli & Gustafson, 4303 Avenue F, Austin, Archts.

BRYAN—Factory—Bryan & Brazos Counties Chamber of Commerce, Industrial Commission, Bryan, let contract to R. B. Butler, Bryan, for construction of furniture factory; steel frame, hollow tile and brick on concrete foundation; built-up roof, etc.; cost \$75,000.

CORPUS CHRISTI—Lumber Yard and Mill —Hawn Sash & Door Co. plans planing mill and lumber yard at 400 N. Port Ave.; to cost \$110,000.

DALLAS—Warehouse — Firestone Tire & Rubber Co. let contract to O'Rourke Construction Co., 1001 W. Commerce St., for fireproof industrial warehouse building at Peeler St.; cost approximately \$250,000.

DENTON—Plant — Moore Business Forms let contract to Carpenter Bros., 1317 Plowman St., for one-story brick and tile, office and plant; concrete foundations, steel frame, steel trusses, built-up roof; J. Murrell Bennett, Tower Petroleum Bldg., Dallas, Archt.; \$500,000.

FREEPORT — Pumping Station — Dow Chemical Co., C. S. Frink, Purchasing Agent, let contract to R. P. Farnsworth & Co., Inc., P. O. Box 74, Houston, for Brazos River Pumping Station.

FREEPORT—Plant—Dow Chemical Co., C.

S. Frink, Purchasing Agent, received bids for reinforced concrete and steel superstructure for castile plant.

FREEPORT—Electric Sub Station — Dow Chemical Co. has plans near completion for electric power substation; cost \$700,000; Rayburn M. Hamilton, Elec. Engr.

FORT WORTH—Factory — A. Brandt Upholstering Co., Inc., plans factory building at 1400 E. Berry St.; cost \$100,000.

FORT WORTH—Hangars—City Mgr. S. H. Bothwell let contract at \$95,116 to Glade Construction Co., Century Bldg., for foundations and utilities for hangars at Municipal Airport.

HOUSTON—Loading Dock—Moncrief-Lenoir Manufacturing Co., 2103 Lyons Ave., let contract at \$40,883 to Bace-Marshall Co., 4009 Center St., for loading docks; W. E. Simpson Co., 1445 Milam Bldg., San Antonio, Consit. Engrs.

HOUSTON—Building — City, Otis Massey, Mayor, has appointed a committee to study present and future needs at the Municipal Airport; will vote on \$8,000,000 bond issue.

HOUSTON—Warehouse—Texas Solvents & Chemical Co. plans warehouse and pump house at Market St. Rd.; Harvin C. Moore, Archt.

HOUSTON—Building—Singer Sewing Machine Co. has plans in progress by MacKie & Kamrath, 2017 W. Gray Ave., Archt., for 3-story building, 4214 Main St.

FORT WORTH—Building — Hartman & Tucker has plans complete and work to start at once on construction of factory building, Corner Norwood and Morton Sts.; Consolidated Architects & Engineers, Fort Worth National Bank Bldg., Archts.

HOUSTON—Bus Terminal — Southwest Greyhound Lines, Inc., T. N. Tibbitt, Fort Worth, plans bus terminal on Texas Ave., between Austin and LaBranch; \$400,000; Grayson Gill, Great National Life Bldg., Dallas, Archt.

HOUSTON—Farmers' Market — Farmers' Market, Gus Roth, Mgr., plans storage and

quick-freezing units, dehydrating system and general improvements; \$250,000.

MIDLAND—Plant—Frontier Chemical Co., Curtis W. Cannon, Vice President-Manager, P. O. Box 5311, plans starting work on construction of plant primarily to be engaged in the production of hydrochloric acid and caustic soda to cost approximately \$400,000.

SAN ANTONIO—Building — Frank Lloyd Wright, Archt., will prepare plans for administration building for San Antonio Transit Co.; Allee B. and Robert M. Ayres, San Antonio, Archts., supervising new shops; estimated cost of entire project \$1,000,000.

SAN ANTONIO—Terminal Building—White and Blue Cab, 502 Dolorosa St., has preliminary plans for terminal building; Malcolm Simons, 526 Aztec Bldg., San Antonio, Archt.

SINTON—Plant — Plymouth Oil Co., Victoria Highway, plans recycling plant and gasoline refinery; cost \$1,500,000; plant and refinery to be built by Jones-Laughlin Supply Corp., Tulsa.

TYLER—Warehouse — Smith Co., R. P. Power, let contract to Collins & Sharp, for constructing warehouse and garage, N. Barron Ave., between W. Erwin & Old Garden Valley Road; cost \$10,870.

VIRGINIA

Improvements—E. I. du Pont de Nemours and Co. plan large addition to hosiery mill at Fieldale.

RICHLANDS — Plant — Warners Frozen Foods received OPA approval for construction of frozen food locker plant; \$62,531.

ROANOKE—Building — Walter Wood received OPA approval for construction of one-story building to house auto repair shop; \$10,000.

WEST POINT—Warehouse — York Supply Co., Inc., received OPA approval for construction of warehouse for storing building and farm supplies; cost \$12,000.

WEST VIRGINIA

HUNTINGTON—Plant — Ellinwood Industries, Inc., R. S. Ellinwood, Pres., has leased warehouse, 12 26th St., for production of garden tractors; soon to construct new building of 40,000 sq. ft., to be located on approximately 8 acres next to the C. & O. Railroad at Westmoreland.

A Constitutionally Controlled Budget

(Continued from page 224)

of Congress, by a formal record vote decides to do so. It is necessary for such a vote in peacetime before Congress can spend more than it takes in. Unless such a record vote takes place, permitting borrowing for government expenses, the Congress is forbidden to exceed its income.

This is a simple explanation of the campaign now on to balance the budget in peacetime.

This constitutional amendment for a balanced budget, which I introduced in the Senate sometime ago, is up for consideration for the first time since the war started. Senator McKellar of the Appropriations Committee has appointed the following members to consider the proposal: Senators Tydings, Maryland, chairman; Hayden of Arizona; Russell of Georgia; Maybank of South Carolina; Bridges of New Hampshire; Gurney of South Dakota; and Willis of Indiana.

This is at least a beginning. However, the success of the proposal will depend on the degree of interest and

public support the measure commands.

A definite program of this kind is long overdue. To enact and follow a balanced budget program from now on is of the greatest importance to the ultimate welfare of every citizen in the nation.

I sincerely hope that this program meets with the approval of the people, as I believe it does, and that in time it will command the support of the people generally throughout the country.

Southern Contracts Total \$764,004,000

(Continued from page 175)

ministrator John D. Small, involves seven factors. These are:

- 1—Necessity to public health and safety.
- 2—Possibility of increasing production of critical products.
- 3—Essentially to increased food production or preservation.
- 4—To provide minimum community facilities for new residential areas developed as part of veterans' housing program.
- 5—Facilities needed for veterans' education.
- 6—Essential and non-deferrable main-

(Continued on page 228)

Construction By States

	May, 1946	Contracts	Contracts	Contracts	Contracts
	Contracts	to be	Awarded	First Five	First Five
	Awarded	Awarded	1946	Months	Months
				1945	1945
Alabama	\$ 4,501,000	\$ 5,055,000	\$ 19,751,000	\$ 86,203,000	\$ 86,203,000
Arkansas	1,145,000	2,332,000	15,320,000	15,320,000	15,320,000
Dist. of Col.	778,000	3,517,000	7,150,000	19,655,000	19,655,000
Florida	36,477,000	23,139,000	108,771,000	27,021,000	27,021,000
Georgia	9,710,000	7,016,000	65,059,000	17,152,000	17,152,000
Kentucky	1,428,000	14,688,000	34,545,000	9,604,000	9,604,000
Louisiana	13,073,000	11,046,000	37,853,000	26,261,000	26,261,000
Maryland	15,416,000	27,065,000	65,492,000	26,800,000	26,800,000
Mississippi	6,419,000	10,529,000	41,871,000	17,189,000	17,189,000
Missouri	8,378,000	4,988,000	23,712,000	7,088,000	7,088,000
North Carolina	6,044,000	14,842,000	37,809,000	13,970,000	13,970,000
Oklahoma	375,000	4,714,000	37,557,000	16,294,000	16,294,000
South Carolina	8,680,000	83,334,000	27,040,000	5,633,000	5,633,000
Tennessee	13,991,000	12,749,000	33,032,000	23,609,000	23,609,000
Texas	33,716,000	76,412,000	186,021,000	158,294,000	158,294,000
Virginia	7,282,000	7,219,000	16,545,000	24,089,000	24,089,000
West Virginia	2,189,000	2,250,000	6,582,000	5,977,000	5,977,000
TOTAL	\$169,600,000	\$311,095,000	\$764,004,000	\$489,600,000	\$489,600,000

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Southern Contracts Total \$764,004,000

(Continued from page 226)

tenance and repairs.

7—Projects not affecting the housing program.

The Federal Works Administrator early in May announced apportionment of the second \$500,000,000 of the \$1,500,000,000 fund authorized by the Federal Highway Act of 1944. The money is for the fiscal year beginning July 1 and was allotted as follows:

\$225,000,000 for the Federal-aid highway system, apportioned on a basis of one-third in proportion to area, population and mileage of rural mail routes; \$150,000,000 for secondary or feeder roads, apportioned on the "one-third" formula, except that rural population is substituted for the total population; \$125,000,000 for the Federal-aid system in urban areas, apportioned in proportion to population of towns of 5,000 or more.

Total for the southern states was \$163,113,462. This was apportioned as follows:

Alabama	\$9,765,114
Arkansas	7,539,755
District of Columbia	2,974,602
Florida	7,003,447
Georgia	11,574,557
Kentucky	8,925,106
Louisiana	7,466,925
Maryland	4,800,213
Mississippi	7,976,456
Missouri	14,380,346
North Carolina	11,376,902
Oklahoma	10,132,142
South Carolina	6,232,201
Tennessee	10,035,524
Texas	28,775,144
Virginia	8,794,356
West Virginia	5,360,672

The prospects that the Veterans hospital program would be retarded by rising costs looms on the construction horizon. Bids, say Veterans Administration officials, are running 50 to 100 per cent higher than original estimates, and the expectation is that Congress will be asked for additional funds to meet the difference. Materials are to be delivered to the projects on a priority basis.

The Veterans hospital program calls for 74 new hospitals and 46 additions. President Harry S. Truman has already approved 27 sites. Sixty-six of the 74 sites were surveyed at the middle of April. Of these, the Veterans Administration has agreed on 50, including the 27 sites approved. About \$440,000,000 is available for the projects.

The \$169,600,000 May total for southern construction is twenty per cent lower than the figure for the preceding month, although it is more than twice the total for the fifth month of 1945.

The May total, in fact is the second highest for any month since March, 1943. The highest figure in that period and also the peak of this year so far, was April's \$214,494,000.

Components of the \$169,600,000 current May total are:

\$56,069,000 for private building, includ-

ing \$49,111,000 for residential work, \$3,162,000 for commercial projects and \$2,522,000 for assembly buildings such as churches, theatres and auditoriums;

\$39,533,000 for road, street and bridge projects;

\$28,388,000 for public building, including \$16,350,000 for schools;

\$25,074,000 for industrial projects, and \$20,536,000 for heavy engineering, including \$8,978,000 for dams, drainage and earthwork and airports, \$4,877,000 for federal electric project and \$6,681,000 for sewer and water work.

Industrial projects active in the construction news in May, included:

New Orleans Public Service, Inc., New Orleans, La., \$9,000,000 program.

Lone Star Gas Co., Dallas, Tex., \$8,250,000 expansion.

Consolidated Gas, Electric Light and Power Co., Baltimore, Md., \$7,000,000 generating plant addition.

Reigel Paper Co., Acme, N. C., \$6,300,000 paper plant.

Florida Power and Light Co., Miami, Fla., \$5,000,000 expansion.

International Harvester Co., Memphis, Tenn., plant, \$5,000,000.

Electric generating plant addition, San Antonio, Tex., \$3,000,000.

Missouri Farmer's Organization, milk processing plants, Lebanon, Monett, and El Dorado Springs, Mo., \$2,500,000.

Pittsburgh Corning Corp., Sedalia, Mo., glass block and Foamlas plants, \$2,000,000.

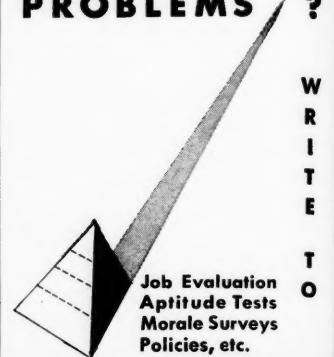
A. S. Abell Co., Baltimore, Md., publishing plant.

Brooklyn Chemical Works, Baltimore, Md., chemical plant, \$1,000,000.

American Can Co., Fort Smith, Ark., plant, \$1,000,000.

(Continued on page 230)

PERSONNEL PROBLEMS ?



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Industrial Plants, Foundations and Soil Studies, Mechanical and Electrical Installations. Designs, Reports and Appraisals.

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Water, lights and sewer service in all buildings.

Fire Department serving all property.

353 houses for rent to families of industries' employees.

Switching service by Missouri Pacific Railroad Company.

Concrete highway to Newport, 6 miles away. Bus service to and from Newport every half hour.

The buildings, suitable for industrial enterprises, are now offered for rent at very reasonable rates to manufacturers or distributors.

Some of the buildings for rent:—

Six warehouses, 47' x 191', concrete floors raised 3' and loading platforms from railroad track; each warehouse separated by 1' brick fire wall.

One cold storage plant, 26' x 108'—8½' high, raised concrete floor, loading platform on railroad track, cold storage plant completely equipped.

One warehouse, 20' x 140', concrete foundations, loading platform on railroad track. One large machine shop—already contracted for by Trimfoot Shoe Company for pilot school.

One warehouse, 20' x 100' loading platform.

One hangar, 202' x 162'—40' high, concrete floor, sturdy construction, compo. roof.

One hangar, 122' x 96'—37' high, concrete floor, strongly constructed, compo. roof.

One garage, 32' x 95', concrete floor, equipped with work benches.

One garage, same size with gas pumps and grease racks.

Four link trainers, each 108' x 25'—12½' high, concrete floors.

Officers' Club—complete kitchen equipment.

Four enlisted men's mess halls, concrete floors, temporary construction.

All housing units of one to four rooms, equipped with ranges, hot-water tanks, heating stoves and ice boxes.

Parties interested can secure further information by writing to
Dr. H. O. Walker, Mayor, City of Newport, Arkansas.

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We're so certain your business will prosper in South Carolina that we'll turn the state upside down to help you get located. First, we give you facts... detailed, reliable, specific. But we don't stop there! We offer every cooperation to help you get the greatest benefit from the numerous natural resources of this state. During the past year, 150 new industries chose South Carolina, but there's room for thousands more! Write State Research, Planning & Development Board, Dept. E, Columbia, S. C.

South Carolina

WHERE RESOURCES AND MARKETS MEET

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FOR SPECIAL JOBS ... LIKE YOURS

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More POWER to YOU

Ingalls steel was used in these new power plants. At right, addition to the Georgia Power Company's Plant Atkinson, Harryat, Ga. Below, power house for the Aluminum Company of America, Mobile, Ala.

INGALLS

STEEL

THE INGALLS IRON WORKS COMPANY, THE INGALLS SHIPBUILDING CORPORATION, The Steel Construction Company, Birmingham Tank Company. Offices at BIRMINGHAM, New York, Washington, Pittsburgh and New Orleans. Fabricating plants at Birmingham and Pittsburgh. Shipyards at Pascagoula, Miss., and Decatur, Ala.

Southern Contracts Total \$764,004,000

(Continued from page 228)

Ethyl Corp., Baton Rouge, La., additions, \$1,000,000.

Kraft Foods, Inc., Fayetteville, Tenn., plant addition, \$600,000.

Holeproof Hosiery Co., Macon, Miss., plant, \$500,000.

Armstrong Cork Co., Jackson, Miss., plant, \$500,000.

Verson Allsteel Press Co., Dallas, Tex., plant, \$500,000.

United States Engineer, Oak Ridge, Tenn., atomic power experimental laboratory, \$500,000.

Institute of Textile Technology, Charlottesville, Va., building, \$499,000.

Bethlehem Steel Co., Sparrows Point, Md., finishing building, \$480,000.

Mountain States Telephone Co., El Paso, Tex., exchange addition, \$410,000.

Frontier Chemical Co., Midland, Tex., plant, \$400,000.

Knoxville Fertilizer Co., Bristol, Tenn., plant, \$400,000.

Warner Brothers Studio, Dallas, Tex., film exchange, \$392,000.

General Shoe Corp., Nashville, Tenn., plant, \$350,000.

Kroehler Manufacturing Co., Shreveport, La., plant, \$350,000.

Linton Pencil Co., Louisville, Tenn., lead and eraser plant, \$300,000.

Victory Motors, Inc., Atlanta, Ga., building, \$251,000.

C. O. Smith, Moultrie, Ga., plant addition, \$250,000.

Owen Brothers, Stock Yards and Packing Co., Inc., Jackson, Miss., meat packing plant, \$250,000.

Tennessee Coal, Iron and Railroad Co., Memphis, Tenn., warehouse, \$250,000.

B. Green & Co., Baltimore, Md., warehouse, \$250,000.

Continental Motors Corp., Dallas, Tex., plant, \$250,000.

Campbell Coal Co., Fitzgerald, Ga., saw mill, \$250,000.

Southern Gas and Electric Corp., Bradenton and Sarasota, Fla., gas plants, \$250,000.

Rheem Manufacturing Co., Sparrows Point, Md., manufacturing building, \$200,000.

Ragland Brothers, Birmingham, Ala., warehouse, \$200,000.

Peaslee-Gaulbert Corp., Jacksonville, Fla., warehouse, \$200,000.

Athey Paint Co., Baltimore, Md., building, \$184,000.

Ferro Enamel Co., Nashville, Tenn., factory, \$150,000.

Niagara Sprayer and Chemical Division, Food Machinery Corp., Jacksonville, Fla., plant, \$135,000.

Fosgate Growers Association, Forest City, Fla., packing plant addition, \$125,000.

Cooperative Seed and Farm Supply Service, Baltimore, Md., building, \$125,000.

International Harvester Co., Savannah, Ga., retail establishment, \$100,000.

Hermitage Feed Mills, Nashville, Tenn., expansion, \$100,000.

(Continued on page 232)

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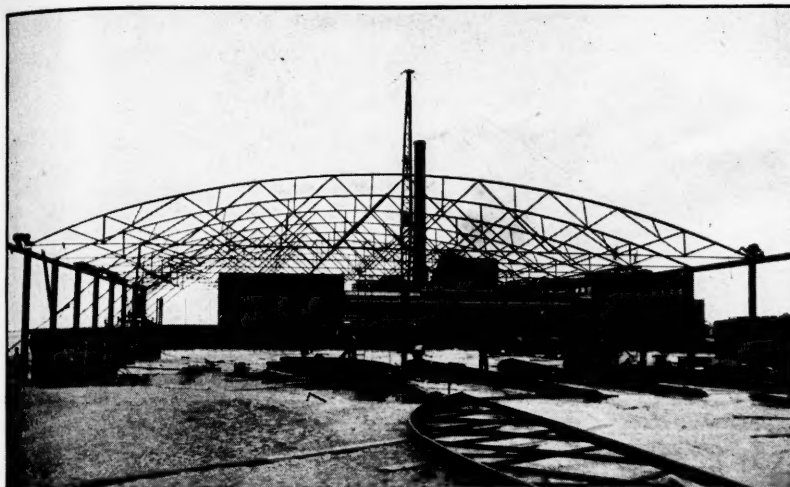
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Nashville,



ELECTRIC ARC WELDED

Structural Frame
For
Warehouse
Port St. Joe, Fla.

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CONSTRUCTION
AT
LOWER COST

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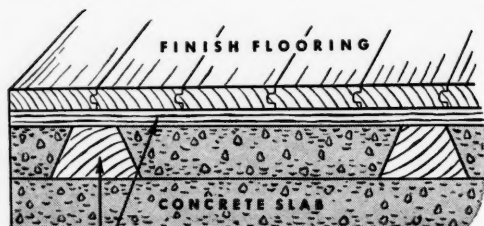
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WOLMANIZED* SUBFLOOR AND SLEEPERS

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You can't just brush it on, you can't dunk it on . . . you've got to drive it into the fibers of the wood to get real protection. Here at American Lumber & Treating Company, we do it under great pressure in steel retorts. The protection is there for keeps.

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CREOSOTING

1678 McCORMICK BUILDING, CHICAGO 4, ILLINOIS

Southern Contracts Total \$764,004,000

(Continued from page 230)

Sheppard Warehouse Co., Statesboro, Ga., tobacco warehouse, \$100,000.

Rennart Lumber Co., Miami Shores, Fla., mill work shop, \$100,000.

Associated Seeds, Inc., San Antonio, Tex., warehouse and processing plant, \$100,000.

Garment factory, Drew, Miss., \$100,000.

Tennessee Gas and Transmission Co., Greenville, Miss., aerial pipe river crossing.

Large Housing Projects Listed Last Month

ALABAMA

BIRMINGHAM—Residences—Oakwood Estates let contract to Marbury & Boriss for 200 residences; cost \$1,700,000; Pemberton & Mims, Architects.

BIRMINGHAM—Dwellings—Belcher Building Co. plans 2,000 6-room homes to cost \$18,000,000.

MOBILE—Housing Project—Southeastern Investment Co., Inc., plans housing project on 48-acre tract and plans developing residential section to cost \$3,000,000.

ARKANSAS

LITTLE ROCK—Homes—Fauset & Co., Elbert L. Fauset, Pres., plans erecting homes for veterans on 226 lots in West Little Rock and Par Hill; has permit for 15 4-room brick veneer houses, 1400 block on South Van Buren and South Jackson St.

FLORIDA

DADE COUNTY—Residences—Earnest T. Sahlman, 37 NW 3rd Ave., Miami, let contract to Ludwig Bros., 1240 Normandy Dr., Miami Beach, for 2,100 residences in South Miami Heights; cost \$6,000 each.

JACKSONVILLE—Residences—Ernest E. Anders Realty Co. plans 100 residences at Southside Estates, to cost \$600,000; Bernard W. Close, 3954 Cordova Ave., and LeRoy Sheltall, 312 Clark Bldg., Architects.

MARYLAND

BALTIMORE—Dwellings—West Realty Co. will erect 16 2-story brick dwellings, Deering Ave.; cost \$64,000; owner builds, private plans.

BALTIMORE—Dwellings—Park Homes, Inc., 3300 Tioga Pkwy., will erect 27 2-story brick dwellings, cost \$135,000, at 3000-52 Grantley Rd.; Hal A. Miller & Assoc., 337 St. Paul Pl., Archt.; owner builds.

BALTIMORE COUNTY—Dwellings—Watersedge, Inc., 8217 Bullneck Rd., Baltimore, 22, will erect 100 one-and-a-half-story frame dwellings, Logan Village, cost \$570,000; owner builds, private plans.

BALTIMORE COUNTY—Dwellings—J. H. Requard Realty Co., 7003 Eastern Ave., will erect 28 one-and-a-half-story frame dwellings, Walnut Ave.; \$84,000; owner builds, private plans.

NORTH CAROLINA

HIGH POINT—Dwellings—H. C. Player, Player Construction Co., Fayetteville, has preliminary plans for 50 one-family residences in Blair Park area facing Nathan Hunt Drive.

TENNESSEE

KNOXVILLE—Dwellings—Fred S. McMahan, Sevierville, plans erecting 55 house project at McMahan Manor on ten-acre tract at Lay Ave. and McKinley St. and Hillside Ave., to cost approximately \$400,000; brick construction.

TEXAS

FORT WORTH—Residences—Taylor & Todd let contract at \$195,000 to James T. Taylor, First National Bank Bldg., for 30 residences; one-story, at Blue Bonnet Hills addition; Easterwood & Easterwood, Bewley Bldg., Architects.

FORT WORTH—Residences—Trinity Building Corp. is building 162 residences; one-story, at Cleburne Rd., Wayside Ave., Gordon Ave., Frazier Ave., and Townsend Dr.; E. Bedford Jones, 2626 Alameda, Dallas, Architects; owner builds.

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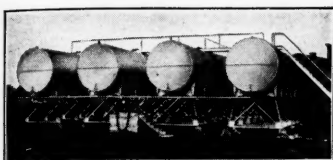
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SOUTHLAND PRODUCTS

—WELDED OR RIVETED—



We now manu-
facture and offer to
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work. Also other
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This applies to field
as well as shop
built equipment.

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DAVIS CYPRESS TANKS

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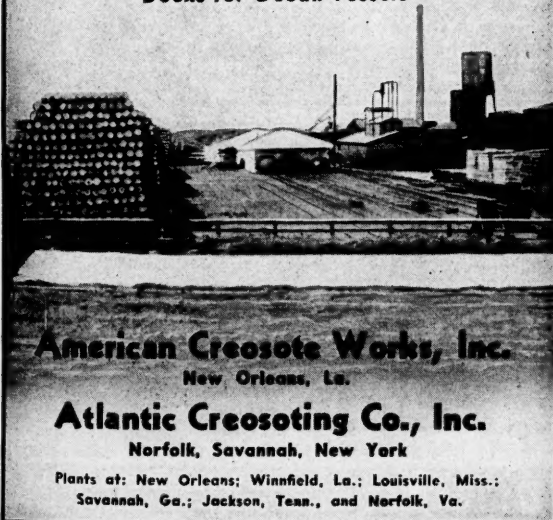
CREOSOTED

Piling, Poles, Lumber, Cross Arms,
Cross Ties

Also Wolmanized Lumber

Decay and Termite Proof—Can Be Painted

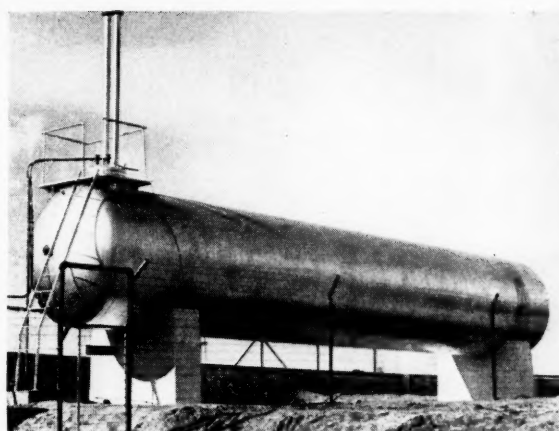
Docks for Ocean Vessels



American Creosote Works, Inc.
New Orleans, La.

Atlantic Creosoting Co., Inc.
Norfolk, Savannah, New York

Plants at: New Orleans; Winnfield, La.; Louisville, Miss.;
Savannah, Ga.; Jackson, Tenn., and Norfolk, Va.



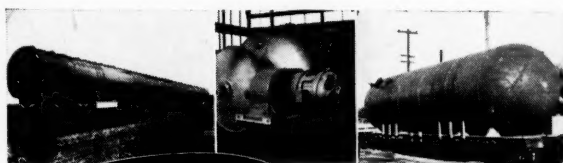
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ings, bunkers, large O.D. piping, ships, barges, dredges, dredge
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economy of maintenance.

We design, fabricate and erect
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cals under pressure; refinery
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Baton Rouge

(Continued from page 173)

The port development association has estimated that annual tonnage to be immediately expected over the proposed Baton Rouge route would be in excess of three and a half million tons. This in itself is justification enough for the building of the new extension and for the deepening and widening of the whole facility, according to the port association, and the United States Engineers evidently agrees, for they have put their seal of approval on the project. Cost of the proposed canal is estimated to be \$8,000,000.

The new route would cut the distance between Baton Rouge and Morgan City, where the alternate canal joins the main waterway, by approximately ten miles. Taking the port association's estimate of 3,500,000 tons of shipping to pass over the route annually, and the standard cost of three cents a ton-mile for barge transportation, the association figures that a minimum saving of \$100,000 a year would accrue to

shippers throughout the life of the facility.

As to the program for the general improvement of the existing cut-off, M. W. Boyer, vice-president of the Standard Oil Company of New Jersey and general manager of its Louisiana Division, estimates that from 17 to 22 cents a ton would be saved in the transportation of heavy movements of freight from Texas to Baton Rouge if the present alternate route were deepened and widened to the same dimensions as the main waterway, and if the new extension to Baton Rouge were made that standard depth.

Baton Rouge has underway a project for the building of an industrial canal to be located about five miles north of the city. This canal and turning-basin, now under consideration by government, would double the existing industrial sites available in Baton Rouge and make the port one of the most modern in the world.

The Federal government has authorized extension of the canal west and south from Corpus Christi, Texas, its present terminal, to the

Mexican border at Harlingen, Tex. Presumably this modification will increase traffic over the entire length of the waterway and its alternate routes. Also to be considered in the future development of the canal is the proposed project to make navigable the Trinity River in Texas. This project, which has been approved by the Army engineers, will produce 800,000 additional tons of shipping a year for the Baton Rouge section of the Intracoastal Waterway, according to an estimate of the Baton Rouge port association.

Not to be dismissed lightly in this discussion of justification for the building of the Baton Rouge Route, is the added advantage that the proposed extension would have of providing 50 per cent of the total required excavation for proper drainage of West Baton Rouge Parish, as recently estimated by the Louisiana Department of Public Works. The department, in its drainage program for the parish, stated that 3,500,000 cubic yards of dredging would be required. Because the main drainage outfall of the parish is Choctaw

(Continued on page 236)

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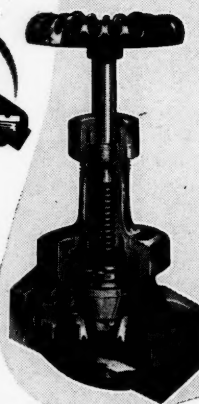
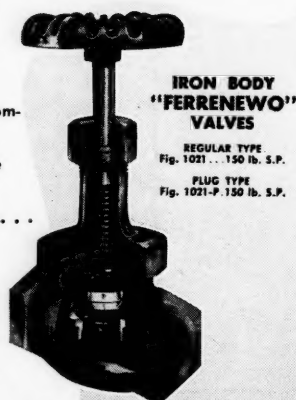
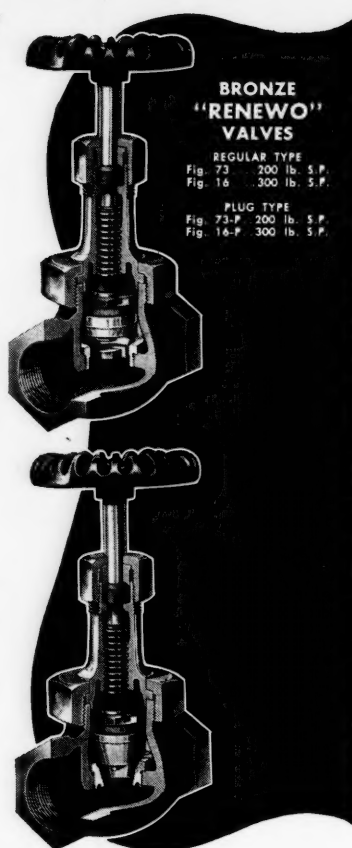
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Baton Rouge

(Continued from page 234)

Bayou, which would in its lower reaches become a part of the Baton Rouge extension, dredging for the canal itself would constitute an enormous saving for the state and parish and would increase the income from contiguous land by about half a million dollars annually.

Little Rock

(Continued from page 178)

rages, church furniture, cabinets, stepladders, wooden boxes, millwork and other interior wood construction, truck bodies, truck trailers, duck calls, venetian blinds, brooms and restaurant fixtures.

Of particular interest in this group is the Bralei Homes Inc. factory, in which Paul Leird, head of a large lumber and building materials firm, and Buford Bracy, a leading building contractor, have joined to assemble and build a new type of prefabricated home which combines the assembly line and individual home-building techniques. The firm's entire output is reserved for World War II veterans under current conditions, and Mr. Leird, who handled large contracts for construction of ammunition and other shipping boxes during the war, has been credited with the principal success in control of a sky-rocketing real estate market which for a time threatened to retard the city's growth in other respects.

Of the remaining 23 new industries established in the Little Rock area during the year, all without subsidization, advertising or promotion of any kind, ten are manufacturing meat products, potato chips, commercial quick-freeze fruits and vegetables, canned and processed vegetables, cottonseed oil, mixed feeds, ice cream and baked goods almost entirely from native raw materials produced in the surrounding agricultural section.

Related enterprises growing out of these include establishment of a \$100,000 food storage warehouse by the Kraft Foods Company, which has several factories in the state, and the manufacture of restaurant fixtures by the Little Rock Restaurant Supply Company.

Outstanding among large users of native raw materials is the Minnesota Mining and Manufacturing

(Continued on page 238)

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Little Rock

(Continued from page 236)

Company, which is building a \$1,500,000 roofing granule plant at College Station, three miles southeast of Little Rock, to manufacture roofing materials. The plant was located here after exhaustive tests had proved the particular suitability of nearby Granite Mountain, an almost inexhaustible source of nepheline syenite, for this type of roofing material.

Also utilizing native raw material is the new \$65,000 plant of Consolidated Chemicals Industries Inc., operated from the company's divisional headquarters at Houston, Tex., which will reduce hitherto unmarketable low-grade bauxite ore to

aluminum salts, sulphates and other chemicals.

Exploration of the possible uses of by-products of bauxite is in immediate prospect by Little Rock enterprises who seek to convert the bauxite-mining area in Saline and Pulaski counties immediately south of Little Rock—the home of North American aluminum—into the aluminum center of the United States, ultimately to contain its own smelter and rolling mills in addition to present mining operations and reducing plants.

The first of these new plants is the Aluminum Awning Company, which manufactures ventilated and permanent awnings up to 80 feet long, using former aircraft workers to fabricate the finished product.

Another large user of native raw

material is the Acme Brick Company of Fort Worth, Tex., which has other plants in Arkansas and which is rebuilding and establishing a brick plant on a long-abandoned site within the city limits at a cost of \$150,000.

The Niloak Pottery Company, established more than 30 years ago in a nearby town to manufacture pottery from Arkansas clays, has opened a second plant in Little Rock. Using blended materials from many sources, this company was a volume producer of clay pigeons for army rifle range use during the war and has now expanded into new types of commercial production of stoneware and art pottery. It also is pioneering in the use of nepheline syenite as a flux in manufacturing and a substitute for feldspar. The new expansion represents \$80,000 in investment.

Stebbins and Roberts Inc., Little Rock, paint manufacturers, have built a new \$150,000 expansion to their plant to manufacture paints, varnish and putty for distribution in six surrounding states, using both imported materials and Arkansas products.

As a result of this plant's establishment, the Southern Brush Company has established an affiliated \$40,000 plant to manufacture paint brushes.

The Big Rock Stone and Material Company, operating at the "big rock" upstream on the Arkansas River from the "little rock" for which early explorers named the city's site, has added a \$50,000 expansion of its commercial crushed stone, gravel and sand plant. Smaller locally owned concerns, new or

(Continued on page 240)

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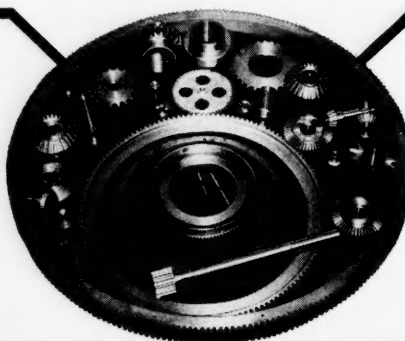
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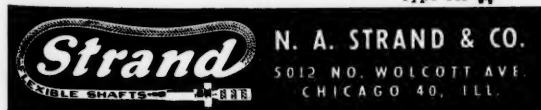
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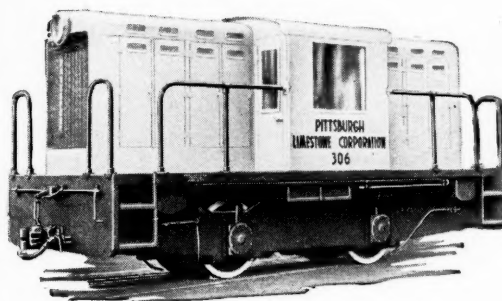
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Little Rock

(Continued from page 238)

expanded, also produce asphalt paving and petroleum products.

New plants which have come to the Little Rock area because of distribution facilities and location include the community's largest single industrial employer, the United States Time Corporation, with 700 employees, which found the section particularly adapted to distribution in the South and Southwest and in potential export to South America. The plant manufactures 70,000 alarm clocks monthly and the Board of Directors recently approved extensive expansion of operations in their two Little Rock plants.

Other plants which have been established or expanded because of the location or because of satisfactory labor conditions include manufacturers of nationally known work garments, women's dresses distributed by one of the principal national firms, mattresses known throughout the South, and neckwear.

Mechanical devices manufactured here in new plant construction,

largely with local financing and operation, include a novel and highly successful ventilating fan adapted by the Phelps Fan Company from a cotton gin blower produced by two generations of the same family for Southwide distribution, and a line of lawn mowers and garden cultivation equipment produced by the Arkansas Lawn and Garden Equipment Company, established here by R. E. Jenkins, formerly of St. Louis.

Industrial machinery, electrical equipment, rebuilt shock absorbers, nutcrackers of a new type and neon signs are other new manufactures of the area, some in plants operated by veterans who got the idea while in military service.

Bleaching fluids, baseball bats, archery equipment, duck calls and other small new manufactures have a large backlog of orders as they go into their second production year.

The Industrial Committee of the Greater Little Rock Chamber of Commerce honors a manufacturer of the community at one weekly luncheon meeting out of each month, and elaborate exhibits of this manufacturer's plant and products are

set up in hotel lobbies for the event. Photographs of these exhibits are sent to distant manufacturers who inquire about locations.

The Arkansas Power and Light Company is erecting a \$3,500,000 steam generating plant in the North Little Rock industrial area, at Rose City, to provide for anticipated additional power needs, and the Arkansas-Louisiana Gas Company is laying additional industrial natural gas lines from Louisiana and South Arkansas gas fields through the present and prospective industrial sections to serve the power plant and other customers.

The year's growth hasn't always been easy, nor is local capital invariably friendly. In one case an out-of-state concern which had owned a large piece of industrial property for many years without operating it was persuaded to develop and open the plant when it became evident that a group of local business men were going to construct a plant of their own. The community needed this particular industry.

The primary job of finding suitable and sufficient space for new plants moved slowly for a time, but is being met with specific plans for erection of buildings by local interests. The United States Time Corporation came because a building with 20,000 square feet of space in the wholesale district was erected by local private capital for lease, and an additional 14,000 square feet on the second floor of an office building two blocks from the heart of the business district was available and suitable for use as a separate assembly plant.

Sometimes it was difficult to get the proper supply of parts for a completed production job, particularly in the metalworking and casting industries, but eventually the supply was channeled into the new firms' hands.

Sometimes a newcomer predicted that he wouldn't be allowed to buy what he needed in the competitive local market. In one case a user of lumber predicted this so accurately that the community almost lost the plant. But one firm farsighted enough to supply him and retain the plant was found.

Some of the bugaboos that newcomers expected weren't to be found

(Continued on page 242)



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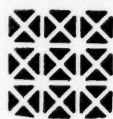
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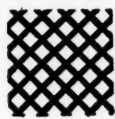
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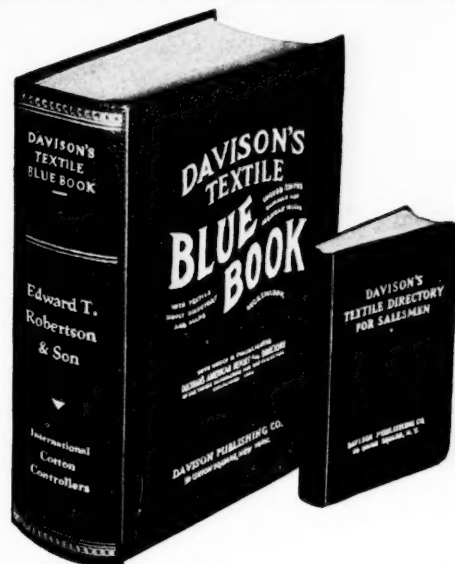
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Executive, Production and Sales Offices at RIDGEWOOD, NEW JERSEY, U. S. A.



Little Rock

(Continued from page 240)

at all. A large Eastern manufacturer repeatedly asked the Industrial Committee of the Greater Little Rock Chamber of Commerce how to maintain satisfactory relations between white and Negro workers in their plant. They were told to provide separate wash rooms, lounge and lunch room facilities, and to leave the rest to the employees themselves. "They'll segregate themselves and get along amicably if you'll do just that much, and no more," the dubious Easterners were told, and it proved to be true. No color line is drawn in employment of unskilled and semi-skilled workers, and both white and Negro workers are employed in the same departments and on similar jobs without conflict or dissatisfaction in either group.

All of the difficulties were merely growing pains, and as others develop, they are being handled with an eye to the future—a future that only five years ago would have seemed highly improbable.

On one hand there is the excite-

ment of rapid but stable growth—the visual evidence that a country town of 1910 and a small city of the World War I period is finally growing up.

Mormacgulf

(Continued from page 180)

peacetime ship contracts on which the Ingalls yard is working at present. Other contracts include 14 modern cargo ships for Lloyd Brasileiro, Brazil's government-owned steamship line; three luxury liners for Delta Line, and four huge all-welded ocean-going hopper dredges for the Corps of Engineers, U. S. Army.

The 492-foot Mormacgulf, which headed south with a deck cargo of trolley cars for Bahia, is of all-welded construction like her sister ships, having a molded beam of 69½ feet and a mean trial draft of 27 feet, 3 inches. Her depth, molded to shelter deck, is 42½ feet.

The ship has a displacement of 17,600 tons and, in addition to normal dry cargo space, there is more than 65,000 feet of refrigerated space and deep tanks for oils with

a capacity of more than 25,000 barrels.

As an extra measure of protection for dry cargo, the ship is equipped with Cargocaire, new ventilating and dehumidifying system, to prevent sweat-caused damage. A liquid cargo system is provided for the transfer of cargo fuel and lubricating oils.

The Mormacgulf is of modified C-3 Maritime Commission design, single screw, geared-turbine propelled, with water tube boilers. Lines and general features of the C-3 which took such an important part in the war have been retained except for changes in the interior and superstructure. The vessel develops 8,500 SHP normal, with a 9,350 SHP maximum, and operates at a speed of 17½ knots or more.

Of shelter deck type, the vessel is built on the transverse system of framing with raked stem and a cruiser stern, with two complete steel decks and a third steel deck fitted below the second. The third deck extends from stern to frame 149, except in way of engine the boiler space.



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The Mormacgulf is designed to carry 12 passengers and a crew of 52. Six passenger staterooms, one with an adjoining sitting room, are equipped and furnished for two passengers each. The color scheme of the staterooms is carefully planned, and all airports and doors are draped and the deck laid with fitted carpet. Also provided is a complete hospital and adequate lifeboats each of which can be operated by one person.

There are five cargo holds, three forward of the machinery space and two aft. The Mormacgulf is subdivided by seven water-tight bulkheads, the forward and after collision bulkheads being water-tight to the second deck, and the others carried water-tight to the second deck except for tonnage openings.

Ten kingposts are installed on the Mormacgulf, each fitted for use as a ventilator. Thirty-ton booms are provided for heavy lifts at No. 3 and No. 5 holds. There are also ten 5-ton and ten 10-ton booms—all having an 18-foot outreach over the extreme beam of the ship. The two all-welded tubular steel masts, installed in the center line at approximately frames 71 and 149, are constructed without rake and stepped to support working loads of the booms.

The fire protection system, extending throughout the ship, includes steam smothering in some cargo compartments and CO-2 smothering for the refrigerated sections. This system may be combined with the complete smoke detecting system. All sealed compartments have carbon dioxide protection, and 15 pound portable fire extinguishers

are installed where necessary.

The main propelling equipment consists of a high speed cross-compound double reduction geared turbine. It drives a single propeller through shafting at about 85 r.p.m. when developing 8,500 normal SHP.

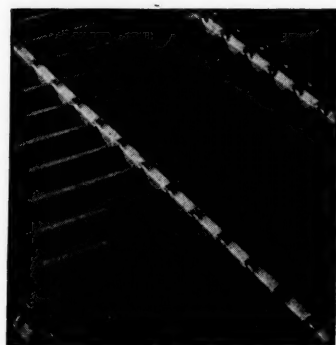
Generators are steam turbine driven, with a guaranteed water rate not exceeding 14.5 lbs. of steam per k.w. hour at normal rated load. All motor driven auxiliaries have d.c. motors at 230 volts. Steam is generated by two water tube boilers at 465 gauge pressure and 765 F. total temperature at super heater outlet. Boilers burn fuel oil under forced draft, and have automatic combustion control equipment.

All machinery and equipment is designed to operate satisfactorily

with a momentary roll of 30 degrees or a permanent list of 15 degrees and a permanent inclination of 5 per cent fore and aft.

The steering gear is of the electro hydraulic double ram type with two hydraulic variable-stroke pumps, each capable of handling the rudder independently with the vessel moving forward or astern at maximum designed power at full load draft.

Two stockless cast steel bower anchors, each weighing 10,640 pounds, one spare bower anchor of 9,030 pounds, and one steam anchor of 3,850 pounds are provided. The electric anchor windlass is capable of hoisting two anchors simultaneously from thirty-fathom depth at a chain speed of thirty feet per minute.



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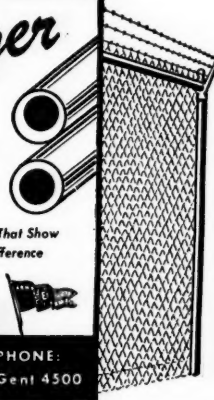
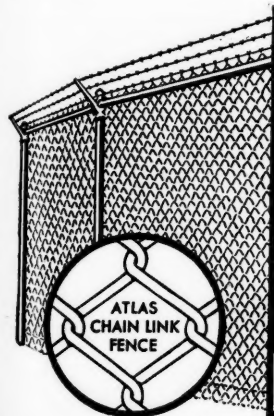




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